YACHTING

Volume LVI JULY • 1934 Number I

The Humber Arm, in the Bay of Islands, reaches in between high mountains on the bleak west coast of Newfoundland

A Long Chance

A Winter Expedition to Newfoundland for a Schooner

By CARL L. WEAGANT

ONE day last September John Alden walked into the office of YACHTING with a very small photograph of a schooner located way Down East in Newfoundland. He knew little about her but, judging from the photograph, she had character and I was captivated by her at first sight. Her pretty sheer and powerful fisherman lines were the expression of wholesomeness. There was a certain romantic appeal in her graceful clipper bow. Her quarters tumbled home nicely. The broad, cocked-up-like-a-duck's stern would lift easily before a following sea. The ample bulwarks, with heavy frames extending above the deck to a husky rail cap, were ship-like. She was not too fancy — there would be no varnish to keep up, no brass to polish. The short schooner rig, with simple gear, appeared snug, secure. Even her name, *Marit*, was suggestive of simplicity.

Marit was 72 feet over all — large enough to make a comfortable home afloat, that is, if I was never able to fit her out and go on a treasure hunting expedition, which, I confess, was the idea motivating the desire to have a boat of this size and heft. Drawing only seven feet of water, she could get into Lloyds Harbor and other snug anchorages, and, perhaps of more significance, she was shallow enough to work the West Indian treasure grounds. And her ample beam of 17 feet 6 inches provided plenty of deck space to carry Frostbite dinghies from race to race and also provided space for winches, air compressors, and diving equipment.

With this scanty information and that little photograph, which I perused for hours under a magnifying glass, carried around in my wallet, and sat up in bed at night viewing, *Marit* soon took the form of a dream ship. I deluged her owner with letters of inquiry. The answers added more fuel to the fire of desire. She had been built for Arctic cruising by Captain Victor Campbell, hero of Scott's fatal South Polar expedition and the only man in British history to hold the D.S.O. in both the army and navy. Such a man, I thought, would build a boat right. Apparently he did. She was virtually fifteen inches thick.

Built for the ice, birch, because of its hardness, three inches in thickness, was used for planking below the water line. Above water she was of pine. The frames were of juniper, nine inches square, and he said she was "full timbered," a term which I later learned meant that the frames were spaced so close together that they virtually

Built for the Arctic, "Marit" was well geared for this sort of weather

constituted a solid mass of wood from bow to stern. In addition, there was an inside skin about as heavy as the outside planking. All this wood was bound together with heavy galvanized spikes and rivets. She was built to take punishment all right, and before long she took it and I was thankful for every inch of that fortress-like hull.

Baxter Burry, a builder of big fishing vessels at Glovertown, on Bonaventure Bay, the east coast of Newfoundland, had launched her in 1927. Modeled after the typical Newfoundland fishing schooners and looking like a smaller replica of Bob Bartlett's *Morissey*, I presume she was not designed but just built. Captain Campbell had scarcely used her and she was moored for the winter in the Humber Arm, near Curling, in the Bay of Islands, on the west coast of Newfoundland.

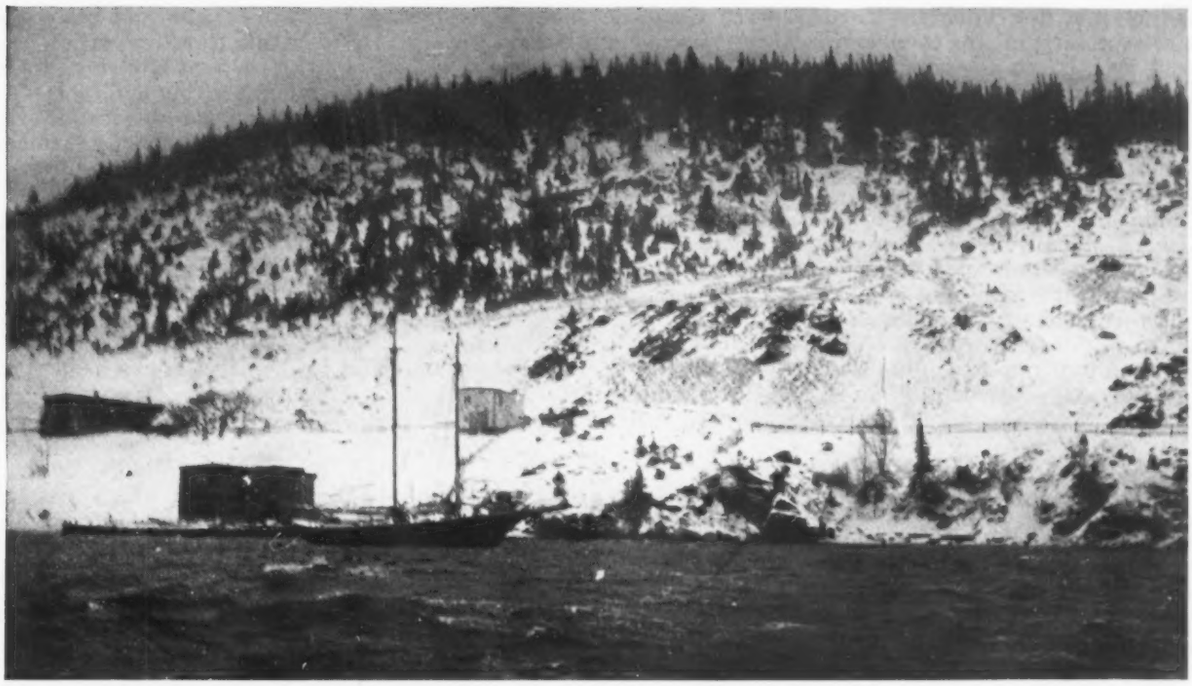
Convinced that she was perfect and fearful that someone would beat me to her in the spring, I let myself think it was necessary to go to Newfoundland as soon as possible and sail her home. Time was not available to inspect her first and so I decided to take the chance and go to Curling with a crew to sail her home. Too much, I admit, was left to chance, but the idea of an expedition to Newfoundland in quest of an unseen and unknown ship was somehow appealing. And a winter passage would be a new and unusual experience.

The idea appealed to Slade Dale as well and he signed on. Coulton Waugh and Dennis Puleston, shipmates in *Pinta* on her Cape Hatteras cruise, were ready for more. Rufus Smith needed no persuasion. A good crew is half the battle and, with that half of the battle won, plans for the attack on Newfoundland took positive shape by the end of November.

With winter duffle piled high on the rear of my car, we pulled out of New York one bleak evening bound for Sydney, Nova Scotia, where we would catch the steamer across the Cabot Straits to Port aux Basques, Newfoundland, whence we would take the narrow gauge train to Curling. There was some 1300 miles to drive over winter roads and only fifty hours to catch the steamer. For two days and two cold nights we drove continuously, stopping only long enough for food and to be hauled out of the ditch by a team somewhere in the back country of Nova Scotia.

Left. On "Marit" Slade Dale was in his element

"Red Hot Jenny" was the center and source of life

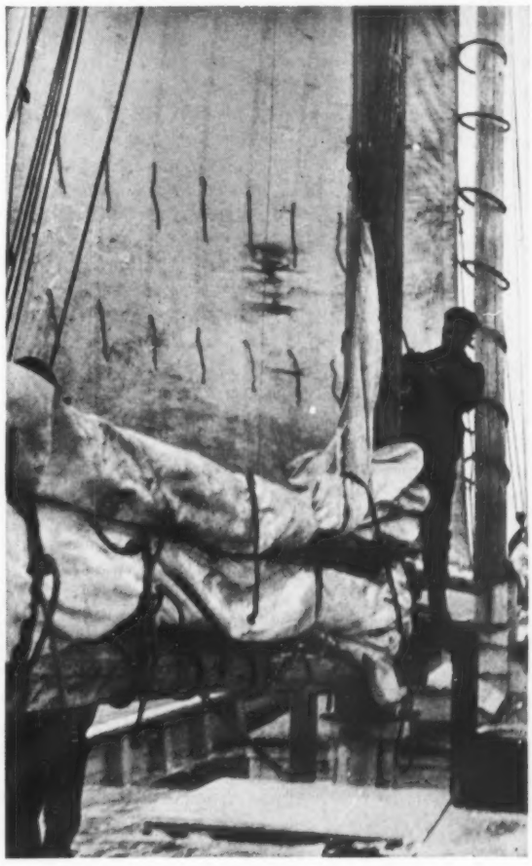


"Marit" as we discovered her moored for the winter

As we ferried across the Gut of Canso to Cape Breton Island, a northwest gale was piping up. Gusty wintry blasts flurried across the narrow reach. Fishing boats were moored for the winter, all forlorn. The landscape was bleak. It grew bleaker as we raced on toward Sydney. As the cold winter sun sank over the wind-swept hills, we sat listening in silence to the whining telephone lines and rushing wind. The outlook was not exactly pleasant.

Finally we pulled into North Sydney, the race against time won by less than half an hour. It had become bitterly cold. Store windows were covered with frost, sleigh runners squeaked over the hard, cold snow, and the steamer, busily loading, was crusted with ice. The driven snow was swirling about the pier as we drove up and unloaded. On board we heard that a large fishing schooner was in distress on the west coast of Newfoundland. This coast, we had been warned in New York, was the most dangerous on the whole Atlantic seaboard at this time of the year. Officers of the steamer *Caribou* added their grim warnings when we mentioned that we were contemplating the run along the west coast on the way south. A turn about the ice-covered deck in the biting wind as the steamer headed north that night brought home the final touch to the cold realities of going to sea in a sailing vessel in midwinter.

Bending on the storm try-sail which was set for seven successive days



However, we slept well after the long motor trip, and when we came on deck next morning we were alongside the pier in Port aux Basques, a grim looking northland haven. Gaunt gray rocks, fringed with salt ice, rose out of the cold green waters to form a snug but dreary looking harbor. Here and there rough unpainted houses clung to the rocks. The surrounding rocky hills were destitute of trees. At the head of the harbor numerous small fishing vessels were anchored. Shabby but interesting, their crude construction and poor gear bore evidence that they were not born of a land of plenty. They gave rise to misgivings about Newfoundland-built boats and we thought that we might very well have embarked on a wild boat chase.

From Port aux Basques to Curling was a day's journey on the narrow gauge railway and soon we were under way. Puffing and chuffing, the funny little train headed north along the coast and later turned northeast into the timber country. Following the rivers, it twisted through mountain valleys, swayed through narrow ravines, and labored over the divide to the Bay of Islands. Eventually, the waters of the Humber Arm came into view through the snow-laden evergreens.

As the train descended the divide toward Curling, dusk was settling on the somber black waters which reached in between the mountains like a Norwegian fjord. In the shadows of the mountainous shoreline on the opposite side of the Arm we could make out a schooner. Moored alone in a rocky cove alongside a cluster of fish piers, she was dwarfed by the shaggy mountain which rose behind her. We peered intently as the train rocked and rolled down the mountainside to Curling. Finally the train creaked to a stop in the hillside fishing hamlet. As we descended to the snow-covered platform with all our duffle, we quickly attracted the attention of an inquisitive group of rustics who turn out for train arrivals. They assured us that the schooner on the opposite shore was Captain Campbell's yacht. They called her a *yacht* and said she was a fine little vessel, which considerably renewed my faltering enthusiasm.

In haste to view the *Marit* before the light faded, we left our duffle with the station master and scrambled down the snowy slope to a fish pier. There we found a boy with a husky launch to ferry us across. Presently the unmuffled "whack, whack" of the one-lunger split the still air which overhung the quiet black water and the pungent odor of exhaust mingled with the fragrant mixed scent of pines, salt and snow. It was a long two miles across the Arm. Then gradually she took form.

Like a seabird at rest on the water, she rode there with an air of confidence. The spars were clear, bare of varnish. Her planking, while a bit rough, was neatly painted. A white sheer stripe and boot top set off the black topsides nicely. The bow rose gracefully to a well-curved clipper bow and husky bowsprit. Her jaunty stern was broad and beamy. The rigging looked good. So did the sails. These and many more swift impressions erased all doubt.

Eagerly we clambered aboard and began exploring. The mainmast was of Oregon pine, the foremast local spruce. The sails were practically as good as new. There was no rust in the rigging. A rustic but capable barrel windlass was mounted on the spacious fore deck. Most of the running rigging was in fit condition for a sea passage. There was not a single detail about her decks to bring disappointment. The husky gear, heavily constructed trunk cabins and bulwarks lent a feeling of security not found on less ruggedly built boats. She was more of a ship than a yacht. So far she was perfect, but we had not yet investigated for soft spots.

A fisherman, Joe Wheeler, had charge of her for the winter and presently he put off from the nearby shore with the keys. Below, she was pretty well cut up with a number of small cabins and an odd layout. However, I did not expect any more and at least there was plenty of room to try out ideas I had long been nursing about interiors. Of much more importance was the condition of the hull and timbers. We poked and prodded with knives. Crawling into the stern, we investigated thoroughly and found all was well there. Everywhere we found massive knees, heavy deck beams, and heavy timbers — all sound.

She had an engine to boot — a 44 horse power, 4-cylinder Gray with reduction gear. It was practically brand new and, later, despite the freezing temperature, it started with a few turns of the crank, the starting battery being low. In the store room, aft, there were two excellent compasses and a brand new storm trysail. And she had a toilet which worked.

With the inspection complete, we returned to Curling for a good Newfoundland supper, left an order for provisons, and then returned with our duffle to spend the night aboard. It was growing colder and below decks the boat was clammy and dank. However, with a rickety wood stove well stoked with fragrant birch logs, we were able to make the forecastle reasonably habitable. In the dim yellow light of a flickering oil lamp we made our beds on the hard wooden bunks and transoms. One man slept on the floor. The fire crackled and hissed merrily. Through the many cracks in the dilapidated stove the cheery flames threw a warm flickering light on the rough-hewn, cozy interior. Snug and warm, we turned in and slept hard on hard beds.

We awoke cold and shivering. Outside the wind howled and whistled. Snow had sifted in the hatchway. The fire was out. Finally someone gathered up enough courage to get out of his blankets and rebuild it. The effect was negligible. Eventually we all turned out, shivering and half frozen. Then we took a look out the hatch. It was blowing a driving, stinging blizzard out of the northeast. The snow, driven horizontally and coming in sheets, was blinding. Hard gusts, which sent white clouds of snow swirling down the decks, actually took the breath away. One look was enough to cancel all thought of taking her across to Curling that day for food, water, and fuel. But there was no grub on board and our stomachs were empty as well as cold. So Coulton, Pills, and I put off for the shore in the jolly boat to forage from the fishermen.

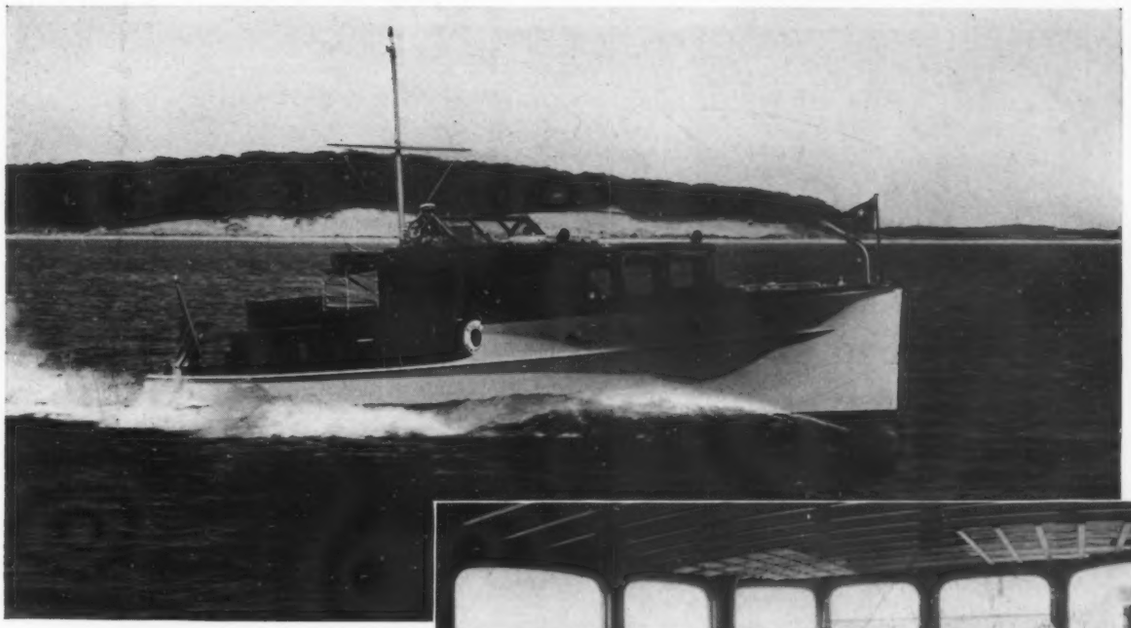
With the wind paralleling the shore, we were swept well to leeward before we made the beach in the lee of a small wharf. Hauling the boat well up the icy beach, we sought shelter in the lee of a shed before ascending the hillside to the group of fisherman homes. There we paused to view the cold grandeur of the inspiring northland scene. Along the shore, partly submerged in drifting snow, weather-beaten fishing boats were hauled out to weather and wait out the long, lonely winter. Built on ice-coated log cribworks, which formed small piers, gray, unpainted fish shacks stood grim and bleak. Over all the snow and wind surged in a seemingly endless white maelstrom.

Then, with heads lowered and eyes squinting, we trudged through the deep snow up the hill to Joe Wheeler's house. He gave us bread and jam and hot tea off a red hot iron stove. From a nearby store we secured some provisions and returned to the jolly boat. Putting off from shore, we found it impossible, with two men rowing, to get up wind to the *Marit*. Slade and Bud Smith would have to go hungry until there was a lull. We returned to Joe Wheeler's warm kitchen to wait. Meanwhile, we discussed the weather and heard tales of winter gales on the west coast. Coulton sketched on burlap with charcoal the outline of the *Marit* from which Mrs. Wheeler would make a hooked rug during the many winter days and nights to come. Outside the wind whistled unabated until late afternoon when we were finally able to get aboard.

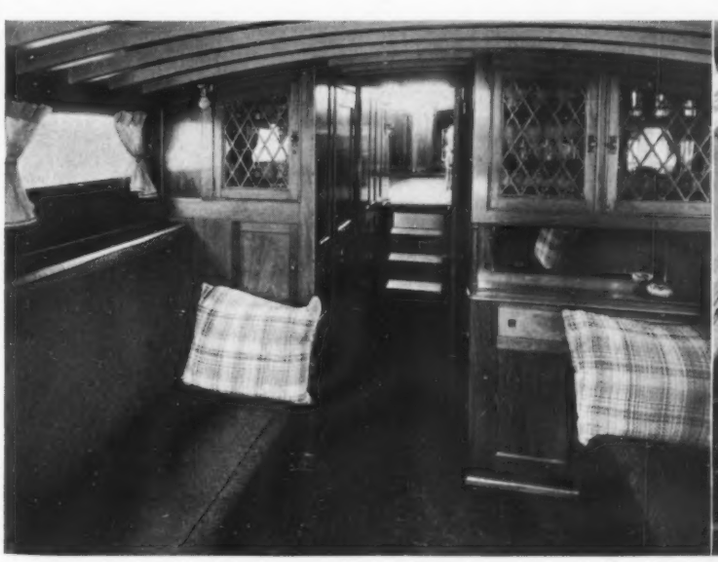
Slade and Bud welcomed us with empty stomachs. The wood stove was burning furiously and soon a simple supper was steaming fragrantly on its red hot top. Seated around the rough pine forecastle table we ate the frugal meal with relish and discussed the interesting possibilities of "wintering in." But next morning was fine and clear and we were able to cross the arm to Curling where we took on supplies. That afternoon we ran under power several miles up the arm to Corner Brook where I had to complete the negotiations of purchase. We tied up alongside a pier near the big International Power and Paper Company, an immense modern plant surrounded by huge piles of pulpwood.

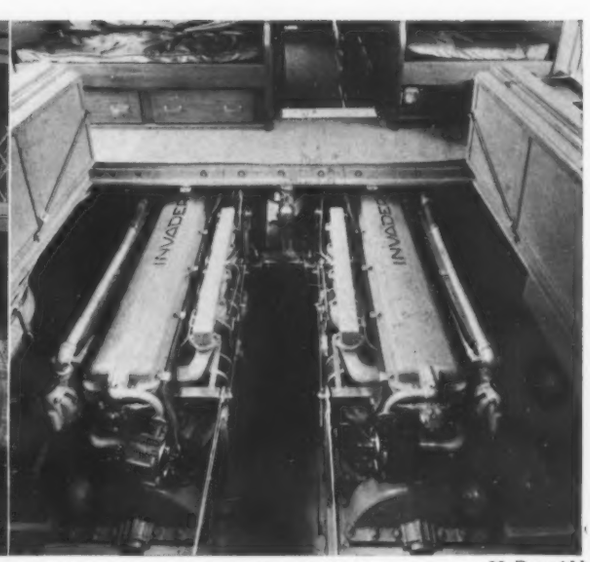
(*Continued on page 106*)

"Akela III," A Fast Stepping Cruiser



Built by George Lawley & Son Corporation, "Akela III," the third yacht of the name designed by Chris. B. Nelson for the same owner, is a 53-footer of attractive appearance. While intended primarily for offshore fishing, "Akela's" draft has been kept to a minimum to permit use in Peconic and Great South Bays. With two Hall-Scott Invaders, she makes 24 miles an hour and can cruise at a steady 20-mile pace. She may be handled from the forward house or the flying bridge, all of her controls being in duplicate

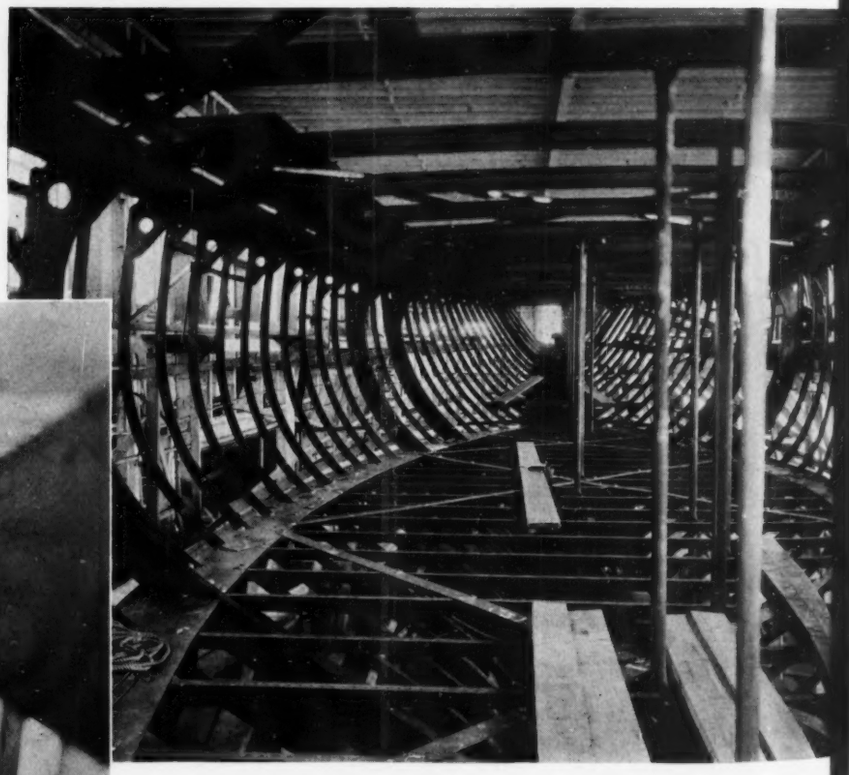




M. Rosenfeld

Building an America's Cup Yacht

The inspiration for the design and the responsibility for the successful completion of the work rest with the naval architects. The designers, Starling Burgess (right), Henry Gruber (center), and Boyd Donaldson of the firm of Burgess & Donaldson, discussing the features of the Cup aspirant "Rainbow"



The hull begins to take shape as soon as the steel frames are in place. Each one is bent separately to conform to the curve shown in the plans after they are laid down full size on the floor of the mould loft

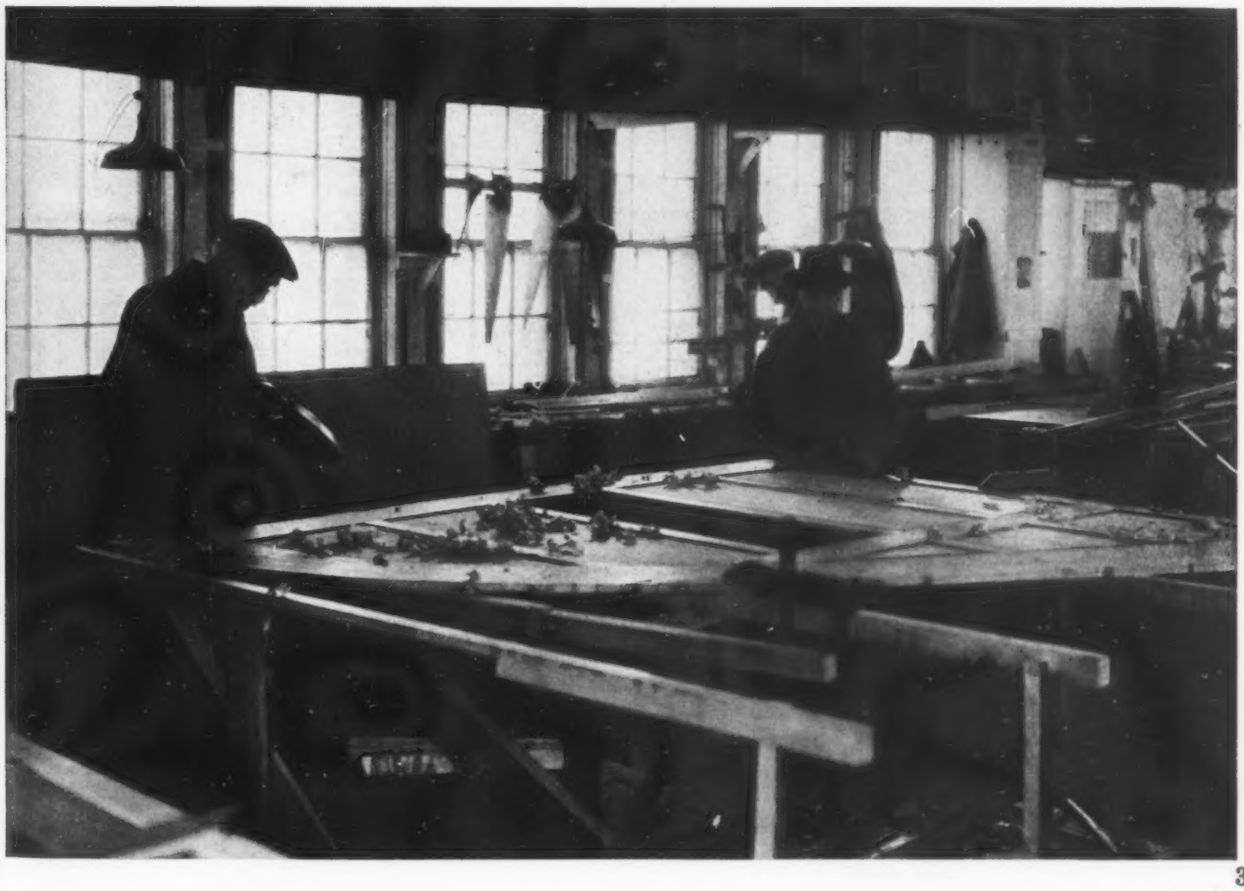
Left. Making the wooden mould in which the lead keel of "Rainbow" was cast to the shape called for in the design

Photos by E. Levick

The builders looking over the plans and the model of "Rainbow." T. P. Brightman (left) and C. W. Haffenreffer, of the Herreshoff Manufacturing Company, Bristol

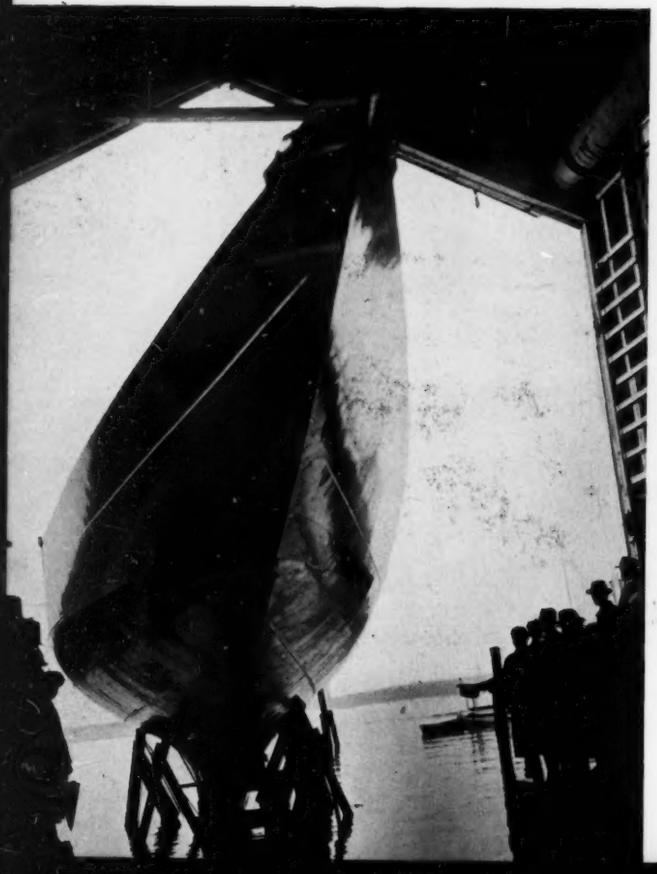
And while this is going on in the building shed the joiners are busy in an adjoining shop getting out the cabin bulkheads and other woodwork to be set up in the yacht later

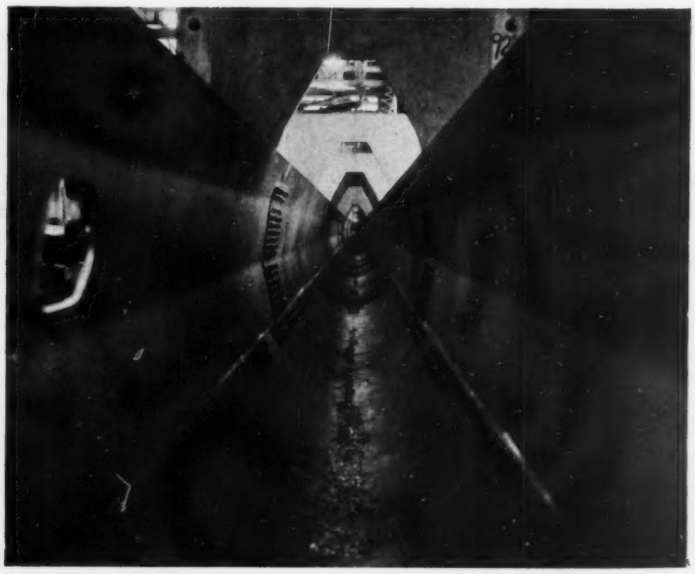
Skilled workmen putting on "Rainbow's" lower, or garboard strake, at the Herreshoff plant. Electric drills bore the holes for the rivets through the bronze bottom plating



Activity is not confined to Bristol. At City Island the sails are being cut, roped, and sewed on the sail loft floor. (Insert) George and Ernest Ratsey going over the sail plan

Finally, launching day arrives, and the finished hull, bottom polished and topsides glistening with fresh paint, slides down the ways to receive her mast and rig





Aeroplane manufacturers were called upon to make the duralumin mast, and the Glenn L. Martin Company turned out this 165-foot pear-shaped spar, weighing about 5600 pounds. The camera caught a view through the center

Photos by E. Levick

E. Levick

Harold S. Vanderbilt, "Rainbow's" skipper, and Designer Burgess show their satisfaction as the yacht takes the water

Right. The staying of "Rainbow's" mast is unique. High tensile steel rods, joined by turnbuckles, replace wire rope shrouds .

After nearly four months of intensive shop work, "Rainbow" steps out on her first sail. (Insert) The masthead fitting, with the special slip hook for carrying the weight of the mainsail

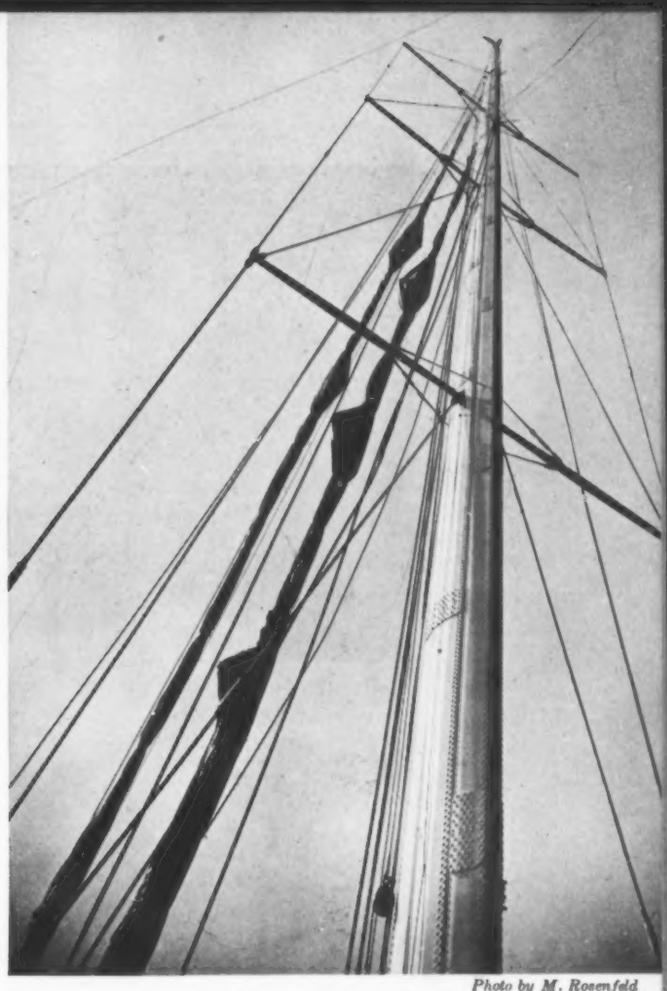
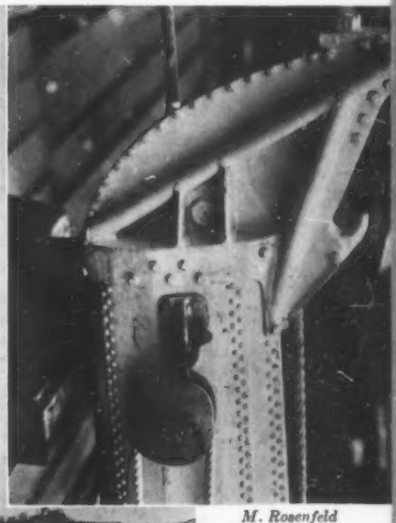
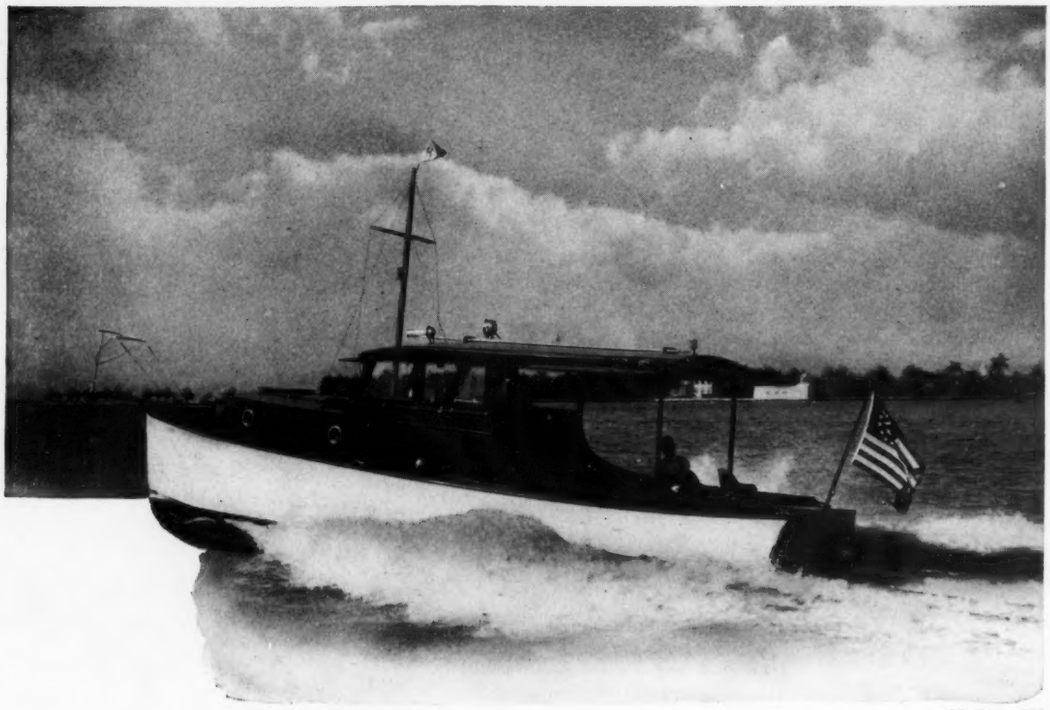


Photo by M. Rosenfeld



M. Rosenfeld

Photo by E. Levick



M. Rosenfeld

A fast motor boat for the fisherman, with a pulpit forward

"Fins" Off Nomans

Striking the "Big Ones" Between Montauk and Nantucket

By JOSEPH CHASE ALLEN

THERE are authorities who declare that progress changes all things and that no old order ever survives the adoption of the new. With all due respect for the wisdom of these sages, their research and conclusions, there is still one ancient order which has survived a multitude of newer ones and that is the legend and the lore of the deep sea fisherman.

When natural forces first obliged man to go down to the sea he went there to fish and for no other purpose. The romance of those primitive days was a woefully undernourished thing, for man had little time or opportunity for the study of beauty, natural or otherwise. But in his experience, purchased at the risk of his hairy hide, and oftentimes his life, he laid down certain fundamental rules which have come down through the centuries, and unto the present day, without serious alteration or amendment. Therefore, when the question as to when, where and how to go fishing is raised, the root of all reliable information is found right where the first fisherman discovered it and where it has been preserved.

The sector under discussion being Montauk to Nantucket, and the subject, man-sized fish, the most reliable oracles to consult are the sun-wrinkled and sea-tanned souls who, for a generation or two, have followed the fish in that section for a livelihood. So literal quotations will be given here, crammed as full of wisdom as a sea trout is with spirling.

The yachting fisherman presents a problem that differs materially from that of his commercial cousin. First of all, he is not obliged to show a profit at the end of the voyage and in consequence he is satisfied with a much lighter catch. Second, as he goes fishing for pleasure and excitement, he is not likely to be willing to sacrifice too many of the comforts of modern civilization while engaged in the pastime. Hence the importance of a convenient base of operations, with due consideration for the distance from fishing grounds and the temperamental New England weather, which may easily make or mar a cruise.

Considering all these things, the island of Nomansland, lying off the southwest corner of Martha's Vineyard, offers the finest example of a hub around which all branches of fishing circulate in due time, and here is the rule as defined by Capt'n Chester Robinson who has inherited it from past generations. "Capt'n Chet" will be encountered by all fishermen who visit these bearings this season and he does not look one half of his ninety-odd years. But a careful check on the length of time that he has served in fishermen, tugboats, the Navy, and in various other types of vessel, will convince his listener that the story-teller can be no less than ninety and is probably far older. But the rule:

"Swords strike first off Block Island, just about mid-June. Tuna are usually sighted off Montauk before any other point easterly. By July 4th, the swords are lying close in to the south'ard of Nomans, and from that time on until October, swordfish may be found and taken in the nearby vicinity of Nomansland, off the south side of Martha's Vineyard and around the mouth of Vineyard Sound."

This is the rule of the ancients, and if anyone feels the least bit skeptical about accepting it, he has only to visit Menemsha Creek basin during the period mentioned and take account of the fleet of commercial fishermen who are making this place their headquarters. This is the most convincing proof that the body of fish forsake the places where they appear first, traveling easterly, across Georges Banks, clear to Nova Scotia, eventually. But a sufficient number remain around Nomansland to supply good commercial fishing to small vessels and launches.

It is logical to assume that the yachting fisherman will not put to sea in anything resembling an ocean liner; they are inconvenient things to fish from either with rod and reel or with the harpoon. Incidentally, if the aforesaid yachting fisherman wishes to be accepted into the clan, he will forget the "harpoon" and call the instrument an "iron." With a moderate-sized craft at his command, and desirous of fishing whenever he feels like it, this area around Nomansland and the westerly end of the Vineyard fits his case with all the precision of a mackerel in a scupper-hole.

Swords are mentioned primarily because their presence is the barometer from which deductions may be made regarding other species. If there are swords, there are marlin-swords. There are sunfish, striped bass and blues, tuna and various sharks. Operating around Nomans, the fisherman may take a fling at these various fish according to weather conditions at any time between July first and October first.

Swordfish weather will coax him offshore, where he can man his masthead half an hour out of Menemsha Creek. If a norther kicks up a wind chop, he can run in under the cliffs of Squibnocket, and there, in the smooth water, paddle about in a small boat and try the striped bass on their favored ground. A southerly or sou'wester will make all this area uncomfortable for pleasant cruising, but there remains Devil's Bridge Ledge, and the grounds farther east in Vineyard or Nantucket Sound, where the blues are found. In short, this sector of ocean offers fishing somewhere on every day in the season unless an actual storm is raging.

Now as to counsel, comforts and caution, the three

(*Continued on page 94*)

Commercial fishing boats, direct descendants of the Cape Cod cat, alongside the wharf at Menemsha

+

The tuna, or horse mackerel, is a sizable fish to take with rod and reel

A couple of striped bass caught with rod and reel off Squibnocket, Martha's Vineyard, in the summer of 1933

U. S. Weather Bureau

As the characteristic rolling cloud line approached, we busied ourselves in shortening sail

A Line Squall off Cape Hatteras

By A. C. STRONG

TEMPTRESS, returning from a winter's cruise, anchored off old Fort Marion, St. Augustine. We were in from Little Bahama Bank, British West Indies, and we hoisted the yellow flag. It was practically an entrance in distress, for we had eaten ourselves out of house and home during the last weeks in the islands.

No one paid any attention to the quarantine flag. There was enough gin and vermouth left for cocktails, however, authentic Dutch gin and Italian vermouth, and it was cocktail time. Thus fortified, the skipper rowed ashore.

There was a flurry in the Custom House, and notable goings on in a grocery store. Fresh tomatoes and asparagus, new potatoes, baker's bread and fresh meat came aboard along with the Custom Officer and the *pro-tem* Port Doctor. The doctor brought a stethoscope, tongue depressors, and a thermometer in a black bag full of pills; and if Bert, Bob, Don and the skipper had not looked so offensively robust and tanned, he would have used them all. Obtaining pratique at St. Augustine was a novelty for all concerned.

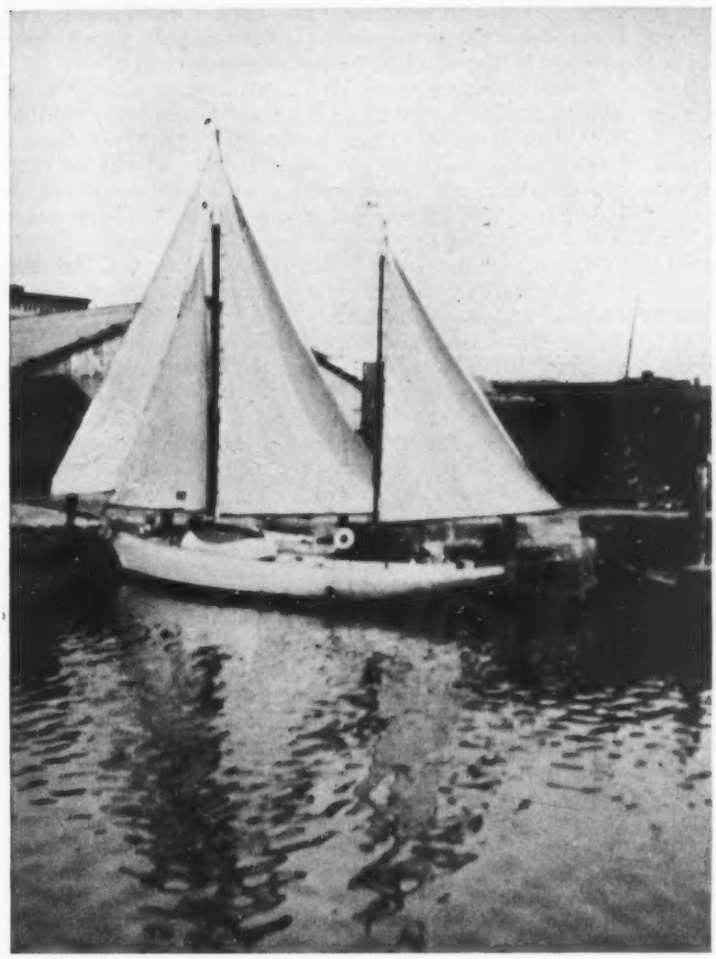
Next day, Bob and Bert steered a Ford towards Chicago, while Don and I explored the old town and sat on deck in the pleasant spring weather. We were waiting for a new shipmate from North Carolina. Sonny joined in a few days, and we waited again, with an ear to the radio, for the wind to haul easterly.

An ocean cruiser is so slow (this one is, at any rate) that it seemed best to wait for a northeast wind and the settled weather following it, before shoving off for the north — no Inland Waterway for us. Then, in all probability, we would reach Charleston before another cycle of head winds made coastwise sailing a doubtful pleasure, even before they made a lee shore. The wind was in the north, and on the next day WJAX, Jacksonville, broadcast: "Hatteras to Florida Straits, moderate N. and N.E., fair weather." The wind hauled the following day.

We sailed for Charleston at daybreak on May 5th. This was Sonny's first trip to sea and St. Augustine Inlet is a proper preface to the sea. It is not much better marked than when Ponce de Leon sailed in (he must have been a navigator). The shrimp fleet was going out that morning. They all passed us, and we followed until they lost us near the lighthouse. The devious way out has two rusty red nuns, third-class nuns, where the channel rounds a spit. There were breakers on either hand, and tide rips and confused currents made smacks behave like corks. Smacks and yachts. Then, after passing the lighthouse and the land and having lost the fleet, we discovered the black can buoy. It was craftily hiding in the curve of ground swells, two miles to seaward, and beyond it was the sea buoy rolling in the ocean. We crossed the bar.

A delightful three days' sail followed, out of sight of land. The sea was smooth. Gentle to moderate easterly and southeasterly breezes kept the balloon staysail pulling like a team of horses. And there were calms and the need of a gasoline breeze. On the third day, Charleston's lighthouse appeared ahead, and Charleston's afternoon southwester shoved us briskly up the ship channel. We rounded Fort Sumter and beat smartly across the harbor.

All the romance a town possesses is presented to the sea. Auto tourists entering Charleston, or any other town, discover it to be surrounded by frightful suburban rubbish, gasoline pumps, and hot dog stands. Not so



"Temptress" drying sails at Charleston, where it is easy for the visitor to linger, especially in the spring

After a three-hour struggle with the Stream, we finally slid across the stern of the lightship, going sidewise like a haystack

the mariner. Charleston's waterfront is like an old print or a painting by Van der Velde. Stately white mansions on Bay Front lead to the Battery, where, under ancient trees, a few old cannon justify the name. The Custom House is a classical model for all custom houses, the Carolina Yacht Club looks exactly like a yacht club and, beyond the shore line of docks and old warehouses, the lovely spires of St. Michael's and St. Philip's rise above the town. A bark and several brigantines are needed in the foreground but there were yachts, a famous English cutter, a sloop, two schooners, a yawl, and the ketch *Temptress* to point the view.

It is easy to linger in Charleston, especially in the spring. A very pleasant week passed, and the wind hauled around again southeasterly. "He who drinks Goose Creek water for two weeks never leaves Charleston." We filled the water tanks again and sailed in time.

On May 15th we took our departure from Charleston sea buoy for Frying Pan lightship. Friends on the schooner *Sea Horse* had sailed three days before. I had a hunch that we would beat them to Hampton Roads. Late that afternoon the *Hector* buoy came abeam. It is a convenient wreck about fifty miles from Charleston, on the course around Cape Fear. It gives an irrefutable answer to the skipper's guess on leeway, on time sights and on the patent log.

May 16th, at sea. A broadcast receiver is useful for coastwise cruising. The range at sea is remarkable. Sopranos and crooners are next door neighbors, damn them! but there is useful information to be had. At noon I received time and weather not only from Jacksonville, but from Miami as well. They agreed on both: "Hatteras to Florida Straits, Moderate S. Fair weather." There was a high along the Carolina coast. Our glass had been rising ever since leaving Charleston.

"Well," I said, "let's sail around Hatteras."

The ship's company was delighted. Don is a salty youth, and Sonny had taken to the sea. I suspected that glass, but here was our chance to beat the *Sea Horse*. Noon sight, Lat. 33° 25′ N.

The Frying Pan soon appeared ahead, a chunky lightship tailing to the Gulf Stream. We steered for it ENE. to give it a wireless on change of destination. The southeasterly breeze was very light and the lightship appeared on the starboard bow. The course was changed a point to windward, and presently she was on the starboard bow again. During a three-hour hare and tortoise race with the Stream, we changed our course from ENE to SSE and, close hauled to the little breeze, finally slid across her stern, going sidewise like a hay stack. We blew a conch shell. The crew of the lightship popped on deck. They goggled over the stern at our crab-like maneuver. Could we send a message ashore? We could.

"I'll send over a small boat," said the captain of the Frying Pan. We doused the balloon staysail and came about. The lightship receded southerly, as two sailors pulled over in a yellow dory.

"Say, buddy," I said, "how fast does the Gulf Stream flow hereabouts?"

"This here Gulf Stream," said buddy, scratching a chest like an astrakhan muff, "flows four knots." Thus proving again that natives are nearly always wrong about local phenomena. Our anchored mariners took the message and a bundle of newspapers and magazines. They gave us a typed slip: "Hatteras to Florida Straits, mod. S. Fair weather." That made the day unanimous.

As we jibed over and headed for Cape Lookout lightship, the yellow dory gained the Frying Pan. Against four knots? Well, hardly. The lightship receded, and the southeast breeze freshened a trifle that night. Fair wind and fair tide.

May 17th, at sea. The log reads: "A high dawn. Wind? Chinese lantern sunrise." For an instant a collar at the sun's lower limb stuck to the horizon; rather like the sun as shown in "The Magic Called Mirage," YACHTING, April, 1932, page 106. An hour later a steamer suddenly appeared over the bow. She loomed vertical and grotesque, with great stacks and masts. High visibility and refraction. Easterly blow coming? The breeze hauled to the south as predicted. It was very light.

At 9.30 A.M. Cape Lookout lightship was abeam and nearly hull down. We had averaged only 4.2 knots since leaving the Frying Pan. The sails slatted. Took the main and jib off. The light air filled the balloon staysail. The mizzen made pretences. Logged 2.5 knots. There was gasoline only for emergencies. The noon weather report read: "Southerly winds, shifting to moderate NE; overcast." I didn't like the "shifting," or the "NE," either, and the weather man's idea of moderate often turns out to be fresh. But I'd rather be at sea than run back to Beaufort and attempt that entrance in a blow. We held our course. The light air failed, and we ran the little motor all afternoon. I wanted to get around Cape Hatteras before the weather changed.

Sunset with mares' tails. There were angry clouds that night. A fine breeze came in from the SW. We saw lots of traffic rounding Hatteras, and the ballooner hid the lee sidelight. Took the ballooner off, furled the team of horses and we slowed down perceptibly.

May 18th. Off Hatteras. *12.35 a.m.* Diamond Shoal lightship and Hatteras light in line. Hatteras on the horizon. Many steamers. *7.00 a.m.* Red and angry sunrise. Bar. 30.20, steady. We held a northeasterly course. Just as well to get offshore when the radio and the sky agreed. *8.00 a.m.* Morning sights put us seven miles east of our D.R. position. Gulf Stream or bum observations? But I'm always gratified when sights taken from a bobbing cork may be charted on the adjacent ocean — or the same ocean. I was thinking about that, and about the cinch the coastwise ships have.

I was thinking these pleasant morning thoughts on aids to navigation while at the wheel, digesting a notable breakfast of coffee, grits, bacon and eggs. Just then I looked ahead. Digestion ceased. Far ahead on the northern horizon, and extending as far as I could see on either hand, was a low roll of white clouds. There was a high haze above it.

"Line squall coming! Stow that ballooner! Get the fore staysail on her. . . . Slickers . . . and secure a few frying pans in that galley!"

The Pilot Chart of the North Atlantic Ocean, November, 1929, has an article on the back entitled "Line Squall." Ample time to read it before the squall hits.

"The characteristic long cloud roll may extend in an advancing line for 1000 miles. . . . In many line squalls this rolling cloud is obscured by larger cloud masses, and it is often not clearly seen. . . . The violent rolling motion peculiar to clouds in a line squall is limited to the first 2000 to 6000 feet, while above it the intense vertical currents of thunder storms may reach 20,000 feet or more. A most amazing state of turbulence is often revealed by the motion of cloud fragments, just after the passage of a line squall. . . . Some or all of the following characteristics are observed, although all of them seldom occur in the same line squall.

"Sudden change of wind direction; heavy rain (or hail or snow); thunder and lightning; rapid fall of temperature; rapid rise of relative humidity; very rapid rise of barometric pressure.

"These phenomena result from the advance of air masses of recent polar origin, along a 'polar front,' like the advance of a battle front; and an area covered by warm air of recent tropical, or sub-tropical origin is overcome. . . . The speed of advance is usually 25 to 35 m.p.h., but in some cases up to 60 m.p.h. or more. . . . The barometer rises rapidly when the line squall passes overhead, and the wind suddenly changes its direction clockwise (in the northern hemisphere) from 90° to 180°. . . . The chief characteristic is a rapid fall of temperature, 20° or more in a few minutes."

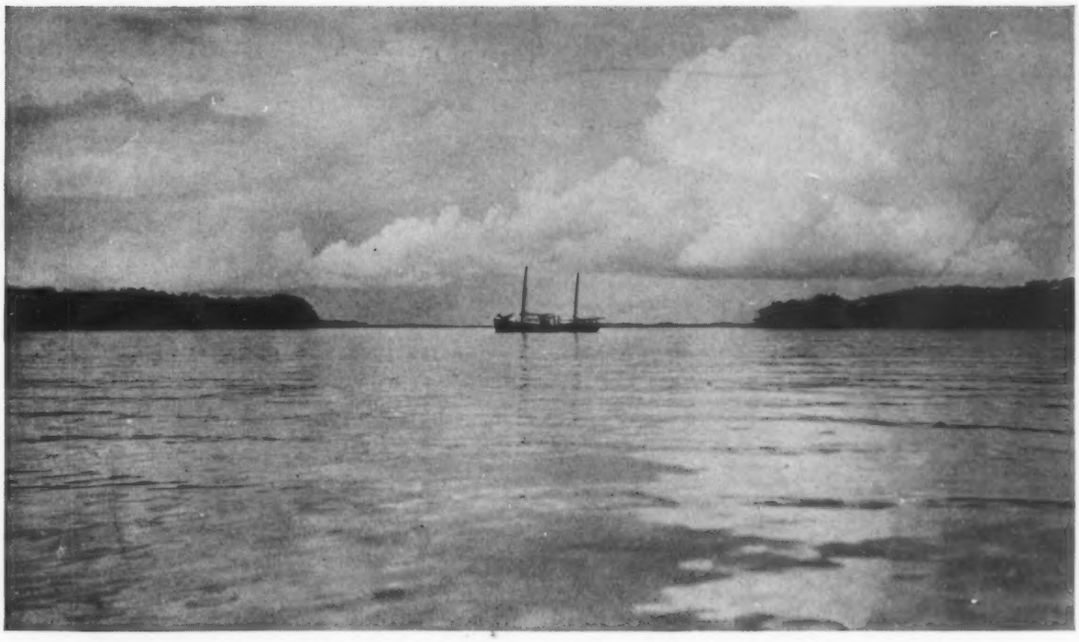
We had ample time to snug her down. A picture was taken of the advancing squall, and of the skipper prepared for the worst. The sea was smooth, the southwesterly breeze still held, and the line squall approached from the north. Just before it hit us, we saw two steamers in a haze, far off the port bow. They were heading southerly under the advancing front. Smoke from their stacks rushed in a horizontal plane ahead of them. Scudding before the squall, the steamers looked windy and indistinct.

Then the rolling cloud line passed over the *Temptress*. She crossed beneath a covered way, which extended from the east to the west, a covered way with a turbulent roof. And then the wind suddenly shifted from SW, force 2, to NE, force 4. At once it was cold and the barometer rose .06 inches.

I kept her on the port tack as the wind hauled. We sailed east, close hauled and very fast. The wind gradually increased. We tacked and tied two reefs in the mainsail before the sea made up.

A course full and by (N by W) paralleled the beach and left nothing for leeway. I have no illusions about the weatherly qualities of the *Temptress* (or of any other small yacht) in a really bad sea. The sea made up and I started the motor. We beat to windward the rest of that

(*Continued on page 90*)



The owners of "Antares" have a conviction that the Caribbean is her favorite cruising ground. But here she is shown on the other side of the Canal, at anchor off the Perlas Islands

"Antares" Goes to Panama

By

HENRY M. CHANCE, II

THERE is a great deal of dissension among yachtsmen as to the location of the ideal cruising ground. It is not hard to start a clubhouse wrangle as to the relative merits of Maine and the Sound, or of the Chesapeake versus Buzzard's Bay. We yachtsmen are a diverse aggregation and our tastes in such matters run from Kettle Creek to the Riviera. *Antares*, veteran of 30,000 miles of ocean cruising in the four years of her existence, has her own ideas on this subject. Take her to Overfalls Lightship, snap the gyro control lever to "Off," and I have the strongest conviction that she would, of her own free will, shape a course for Diamond Shoal and on to the Caribbean.

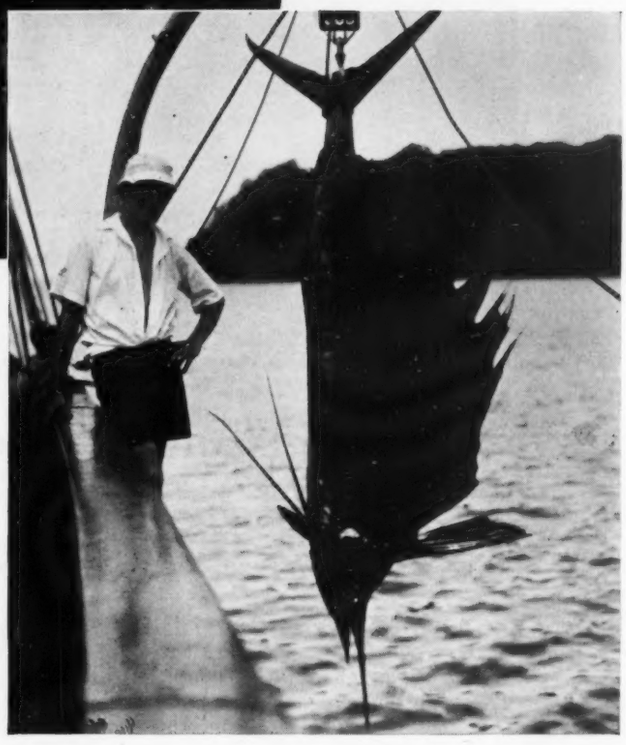
So it came about on the fourteenth of last June that we set sail from the Corinthian Yacht Club at Essington, Pennsylvania. The tide in the good old brindle Delaware was favorable, and by eight in the evening Overfalls Lightship, in the mouth of the river, was abeam. My day at sea always ends at this time. It is lamentable that human needs require us to be laid aside like broken toys for a part of each day. My span of consciousness ends at 8:00 P.M. and begins again at 4:00 A.M. On the other hand, this break in the active portion of life gives the men on the different watches an individual slant, an incommunicable routine, and a varying picture of life at sea.

But wait! Here we are at sea and you have no idea of the makeup of our personnel or equipment. The latter has already been enumerated on previous occasions and it is with hesitancy that it is allowed to appear again. At any rate, here it is.

Antares is a Gloucester-built Diesel ketch, 105 feet long, powered with two 160 h.p. engines, and fitted with almost every available device for comfort as well as safety at sea. Her equipment includes radio for both long and short wave transmission, radio direction finder, Sperry gyro-compass and gyro-pilot, storage Frigidaire, and many other items. The ship is owned and captained by my father, Edwin M. Chance; I am First Mate and Second Radio Operator; Britt, my brother, is Second Mate and Chief Radio Operator. Britt and I are responsible for all electrical gear, gyro, radio, rigging, etc., while the two paid engineers work entirely under the direction of the skipper. All the deck work is done by amateurs who stand the watches, scrub the decks, handle the sails, and eat and sleep. In all, the company numbered sixteen, eleven amateurs and five professionals.

Now to resume the thread of our narrative. Most of us are familiar with the cold, unalluring aspect of the Atlantic in late spring. Further south, however, it is a different story. The line of demarcation along our coast is Cape Hatteras. Diamond Shoals Lightship was sighted in the late afternoon of the second day out. The wind was northwest and blowing fresh, thus giving no inkling of the warmth to come. Suddenly the water changed from green to the warmest blue imaginable. The temperature rose from 55° to 75°. A school of porpoises appeared under the bows, rolling, leaping and playing, enjoying every minute of the rough seas. Little clouds of flying fish burst from our forefoot like coveys of quail before the hunter. Fifty yards to starboard a large shark on lazy fins looked us over and then cruised off into the sunset. Even the most hard hit of the seasick took a new grasp on life.

Penetrating the Panama jungle by river is far easier than hacking through the dense growth



A famous fighter, the great Pacific sailfish. This specimen is nine feet long

Among the guest crew was Dr. William Beebe, well-known ichthyologist of the New York Zoological Society. He was particularly interested in flying fish. During the night these little gliders, attracted by the light, would blunder aboard. It remained only to go around the deck in the morning and collect the specimens. One day, with the connivance of the morning watch, an entirely new species made its appearance. The wings and tail were not out of the ordinary, but the body had a most remarkable resemblance to a banana. It was served to Dr. Beebe on a plate at breakfast with much ceremony and solemnity.

The Northeast Trades had no definite beginning. This was due to the following wind, which had blown us on our way since leaving the Delaware Capes, blending into the northern limit of the trades. With the wind aft, *Antares* made quite smooth weather of it, considering the steepness of the seas as the contrary current piled them up. The runs were averaging close to 240 miles a day. All auxiliaries were working to perfection. The green crew was shaking down rapidly. The new engineer could make her run on fifteen gallons an hour instead of the usual eighteen. In short, the omens were auspicious for a perfect cruise, as indeed it was.

The habit of automatically awakening just a moment before being called to go on watch is a common one. I was surprised, therefore, to be shaken into wakefulness by the twelve to four and asked to come on deck. The watch was worried about a blinking light broad off the starboard bow. I used the stopwatch and got some queer results, but was inclined to blame it more on my state of semi-consciousness than on any irregularity of the light. I knew that no light should be in sight. Eleuthera, Elbow Cay, and the rest of their group were much too far to the westward. But it must be checked up, so out came the charts. Nothing doing. In a rare flash of inspiration I sent a man up the main ratlines with the glasses. He reported that the light no longer flashed, but had steadied and become nothing more than the masthead light of a steamer. The same steamer was still in sight ahead the next night and, strangely enough, her light still blinked with much the same periodicity. The flashing was apparently caused by the light disappearing over the horizon as the vessel rolled.

At 11:00 A.M. of the same day — a muggy, rainy one, and our fifth at sea — San Salvador, that one of the Bahamas said to be the first land that Columbus sighted in the new world, was picked up. It is low and rather barren, having a small negro settlement on the West side.

A typical tropic rain squall rode down wind and waylaid us, blotting out the land. It brought with it the pungent moist coconut fiber smell common to the Bahamas. Caution shifted the course to the westward to allow a more plentiful clearance. That evening Bird Rock Light flashed a bright welcome and the Crooked Island Passage was safely put behind during the night.

The morning of the nineteenth dawned windless and absolutely calm. Great shafts of sunlight stabbed deep into the tranquil blue. Cape Maysi, eastern end of Cuba, came into sight at eight. As we drew abreast of it, it became possible to see the rugged mountains of Haiti, approximately sixty miles across the Windward Passage. In the early dawn of the twentieth, Jamaica crystallized out of an amorphous cloud bank and, by 12:30 P.M., *Antares* was anchored off the Myrtle Bank Hotel, just short of an even six days from Philadelphia, anchorage to anchorage.

Two days ashore rested everyone from the six-day voyage to Kingston and all hands were ready for the 500-mile run to the Canal Zone. *Antares* nosed between the arms of Cristobal's stone breakwater at dawn of June 25th. The port officials were aboard almost

immediately. Since *Antares* had been measured at Philadelphia for her Panama tonnage, a long delay was avoided and by half past seven the pilot was aboard. A cheerful individual he proved to be, a former sea captain and a native of the Eastern Shore of Maryland. He was soft spoken, competent and efficient. Americans should be proud of the administration of the Panama Canal. Everything is timed faultlessly, and the speed and precision with which the ships are handled is amazing. This spirit is found in the other departments of the Canal also. The laundry, government operated, will take the wash from an entire ship at one end of the Canal and deliver it finished at the other, eight hours later. The commissary can stock a large vessel as well as any metropolitan provisioner or ship chandler.

For vessels too small to require the use of locomotives, two alternatives are presented for handling in the locks. One is to lay the boat alongside the lock wall, with the probability of smashing her when the water starts in. The other procedure is to hold her in the middle with four good lines. You need good new ones, too. We chose this scheme and broke out a new hawser for the purpose.

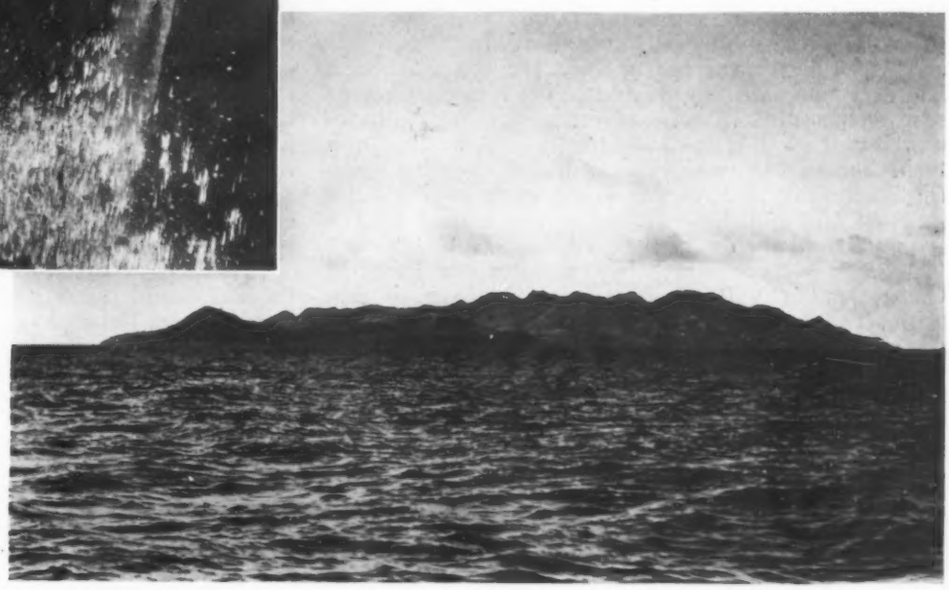
We approached Gatun in a steamy, hot atmosphere, the green walls of the jungle crowding in on either side. A peek or two was afforded up the old French channel. On coming up to the lock, the error that I fell into was to underestimate its size. The interior does not look a thousand feet long on approaching. I was all set to let her drift long before we were nearly inside. Once past the wing wall, however, the real dimensions unfold themselves, and we slid along again on one engine, finally drifting up to the end chain. Here a bit of reverse to hold her, taking care to keep her straight. The heaving lines whizzed down upon us with wonderful accuracy, and in a moment we were made fast. Our lock-mate drifted in behind us and the gates were shut. The water boiled in, sending *Antares* surging and straining like a nervous horse. Soon the correct elevation was reached and the gates opened. The hawsers were slacked, but the heaving lines, still fast, were carried along into the next chamber. The currents met passing the gates are serious and it is extremely likely that a small boat may go into the wall at this point. We nearly did once but got straightened out in time. The ascent at Gatun is the most difficult, no trouble being experienced in dropping to the Pacific level. We swept through the lake and down Miraflores and Pedro Miguel without incident. It may be mentioned, though, that it makes a strenuous day for the men taking her through.

In the Pacific, about fifty miles south of Balboa, lie a group of islands known as the Perlas Archipelago. Here we found our first real stopping place. The group is heavily wooded and populated with an Indian and Negro mixture. Their only industry is pearl fishing. As the islands are far out to sea, with deep water all around, many large fish and mammal denizens of the tropics are found. Among the more spectacular of these were the manta ray and the killer whale.

Every morning those inclined toward fishing went out in the skiff and trolled all day among the green islands and out into the long blue-gray Pacific swell. The sun beat down, and no matter how dark you were you continued to burn until your exposed areas were raw. The catches were varied; among them were dolphin, amberjack, wahoo, mackerel, tuna, and bonita.

The great Pacific sailfish, that we had come so far to seek, eluded us. We changed our anchorage in the islands, hoping for better luck on new grounds. One morning Britt went out with a couple of the boys and Zeb, our fishing guide, who is among the best sailfish boatmen in Florida. They trolled for an hour with no result. A quarter mile further off Pedro Gonzales a school of porpoise rolled lazily. Quite unintentionally Zeb trolled among them. Suddenly, a great bronze shape

Keeping pace with "Antares." These porpoises are in a sedate mood



A notorious resort of buccaneers in former times — Old Providence Island

rose behind the teaser and slashed at it savagely. Britt and Zeb both saw him at once. Zeb hauled in the teaser while the sailfish followed. Simultaneously Britt reeled in. When the teaser vanished the fish decided to take a slash at the propeller. Britt, however, dropped his bait in front of the hungry giant who rapped it with his bill, picked it up and started off. Britt free-spooled the line for an awful fifteen seconds.

"O.K. Zeb?" " 'Bout time to try him, I guess."

Britt set the drag, bore down on the thumbstall and put his back into the strike. The fish jumped clear of the water, and with the reel singing, started off in earnest. He was stopped short of two hundred yards by the slightly too heavy tackle. He turned and started for the boat, jumping wildly and skittering on the surface on his tail. Britt got back his line as rapidly as possible. A few more shorter runs, punctuated by jumps, and the fish was brought alongside. Zeb seized the wire leader and then the coarse bill in his gloved hand. After some thrashing a quick yank landed the victim. It took only ten minutes for the whole battle and the fish jumped clear of the water sixteen times. He weighed an even hundred pounds and was just short of nine feet long. I had the only other try at one of these fish and failed to hook him. We saw a few more jumping in the distance but, on the whole, they were very scarce. During this time Dr. Beebe had collected large numbers of small shoal water fish in tide pools, with seines and various other devices.

Our second engineer had undergone an operation for intestinal complaint some time before we left. On the way down he had been very seasick and an internal hemorrhage had started. He grew worse in the Perlas and we radioed the Naval base, Balboa, for a plane to take him in for treatment. In less than two hours the plane from Coco Solo base, ninety miles away, settled gracefully on the quiet waters of Saboga anchorage. We put the sick man aboard and in less than an hour he was admitted to Gorgas Hospital at Ancon.

Time pressed, and *Antares* was turned back through the Canal. The traverse took five hours, during which we perspired freely. The next objective was Chiriqui Lagoon, a large reefy indentation in the Caribbean coast of Panama, about 120 miles west of Cristobal. Leaving the Zone at ten in the evening, we expected to arrive at Valiente at noon of the following day. The dawn came gray and cold and soon it began to rain as only the tropics can. The mist was so thick that it was impossible to see more than a hundred yards ahead. In the frequent squalls, visibility was nearly zero. The sea was rough and everyone naturally desired to get into a harbor as soon as possible. In spite of this, good judgment required that we slow down and finally stop, waiting for a lift. It came about two o'clock and, after checking up on the landmarks, *Antares* was found to be twenty miles short of Chiriqui. The deficiency was caused by the strong littoral current of the Southwestern Caribbean.

As soon as we were safely anchored in Bluefield Creek, behind Valiente Peninsula, it began to rain again. The downpour lasted for three days, drumming down steadily and unrelentingly. In one morning's rain an 18-foot dory which didn't leak a drop was put overboard. By noon it was completely filled with rainwater.

The reefs of Chiriqui afford excellent opportunities for diving. We have carried a helmet as standard equipment for many years. The apparatus consists of a two-cylinder hand pump, a hose and a weighted copper helmet. The costume is completed by sneakers and a bathing suit. A safe limit of descent for a novice is about fifty feet. The pageant of the sea bottom has often been described by abler hands than these. I can only add that diving is like a trip to another planet. The growth is absolutely unrestrained in its profusion of coloring. The fish, of all shades, shapes, and sizes, swim slowly around, in and out of holes, and through the branching coral. Their utter disregard for the visitor from above is snobbishness without parallel. All life is a slow motion affair on the reef. The diver's movements are in that tempo. The fish move with a luxurious laziness, and all the corals, anemones and fans undulate slowly back and forth with the surge of the sea. The sunlight diffuses and ripples on the smooth sandy patches. All time is suspended as you gaze, awestruck. The only disturbances are the pounding of your heart, the rhythmic sobbing of the pump, while at intervals a great bubble gurgles out from under the lip of the helmet and starts its wobbly course for the surface. The novice diver comes up numb and speechless, strangely elated by the vision of so much beauty.

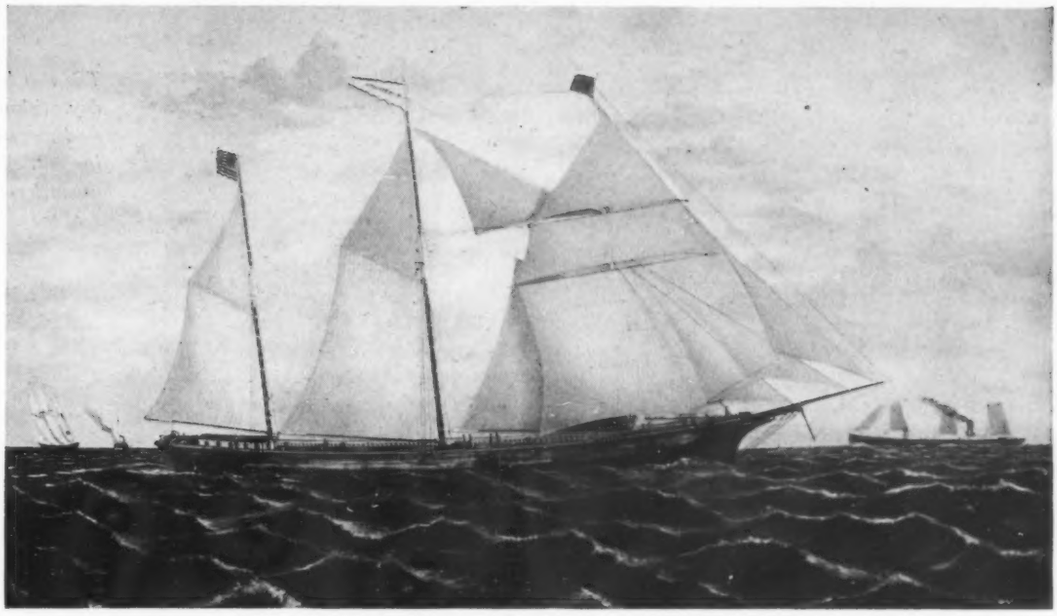
It was with regret that *Antares* thrust her bow out of the narrow entrance to Chiriqui. She passed Tiger Cay where the huge sea, which was the culmination of all the trade wind violence of the entire Caribbean, broke heavily upon the little wooded islet. We felt the violence ourselves as our ship plunged deep into a seething blue-black wave and rose to shake herself, repeating the operation periodically. At 10:00 P.M. Britt got the weather report which told of a hurricane, centered just south of Porto Rico, moving west by north at eighteen miles per hour. A council of war was called, the plan of battle laid out on the chart. It didn't take long to see that the storm would arrive at the western tip of Cuba at the same time as we. In a case like this discretion is much the better part of valor. In the twinkling of an eye the watch put the helm down and we were scuttling sedately for Cristobal, there to wait for the storm to pass.

Everyone enjoyed our short stay in harbor. The *Mauretania* came in on a cruise and the boys, in their "shirtless shorts," paddled over to her in the dugout to see if anyone would throw them a penny. They touched her bow, and rumor even goes so far as to say that they carved their initials on her. Meanwhile the storm had gone on its way and the coast was clear for *Antares* to get to Havana without further ado.

A look at a chart of the Caribbean discloses the hazards of the most direct course from the Canal Zone to Havana. It is a dangerous and reef-laden way. Not only is the route perilous but it is also circuitous. On traversing some of the banks the water is so shallow that bottom may be seen, miles from any dry land. Things like this bow the navigator down with care. It was a relief to get into blue water again, and when Havana appeared over the horizon, just at dusk, the great electric signs were a welcome blaze after four days of somewhat rough sailing.

It is an 18-hour run to Bimini from Cuba's metropolis. The island is low and sandy, the most prominent feature being the tops of the coconut palms. The little ship glides in slowly, with lead line going and my always timid hand on the engine room telegraph. Slow — Stop — "Fifteen Fathoms" is called from forward. Slow ahead again. The color of the sea has changed from deep blue to a lighter shade. It becomes clear as air when the lime green phase is reached. The timid hand reverses the engines; as *Antares* stops and slowly gathers sternway, the anchor chain roars out of the hawsepipe. After a pause, long enough to "set the hook," the telegraph

(*Continued on page 86*)



"Dad said his schooner 'Nellie Redington' could beat any damned steamboat on the Lakes"

Then and Now

Fourteen Hundred Tons Was a Huge Cargo Fifty Years Ago

By CAPTAIN GEORGE E. ANDREWS

AWHILE ago I paid a visit to the Soo, and watched the monster steel steamships pass along the channel in a seemingly never ending procession, each one close astern of her next ahead. The intervals between ships were so short and so regular that they reminded me of a herd of elephants marching into the circus tent, each holding the tail of his predecessor in his prehensile trunk. The great ships seemed alive, intelligent, the few men about their decks merely passengers who had nothing to do with their navigation.

Down channel they went, rolling out clouds of greasy black smoke, bound for the ports along the lower lakes. With twelve to fifteen thousand tons of ore apiece, they would make the round trip from Lake Superior to any port on Lake Erie except Buffalo in seven days. Given an extra day, they would take a cargo of coal back to Duluth. Six hundred feet long, with thirty-six hatches in their broad decks, their capacious holds swallow twelve, fourteen, fifteen thousand tons of cargo as fast as it can be poured in from the chutes along the loading pier. The ore goes banging down with a roar, sparks flashing as iron ore strikes iron chute, the ship is covered with a cloud of dust, and the watcher can see her settle in the water.

Away she goes as soon as she is down to her marks, checking her course by all the modern aids to navigation, until she sidles in alongside the unloading pier where huge clam shell buckets, an operator in each, grab ten or fifteen tons at a bite and dig out her cargo in seven hours or so. Speed, speed; hurry, hurry. The Lake season is short, ships and men are expensive. Load, hustle to port, discharge. Rain or shine, blow high or blow low, the great ship is due in Duluth, Escanaba, Two Rivers or some other port at such and such a time — and she's there, almost to the exact minute. Bound up, loaded with coal, into the Detroit River she goes. It sets in thick. What of it? Fog signals, flashing buoys, fine lighthouses show her the way. Shoving the water aside, she pushes majestically out into Lake Huron and takes the "up track." There is nothing moving south in that lane; the south-bound ships are traveling in their own lane three or four miles away, and the two tracks cross at only one point, just above Thunder Bay, where the shipping from Lake Michigan is met and crossed. Confidence, no worry.

But let's go back fifty years to the old days before steam drove sail off the lakes. In place of the present steel monsters with smoking funnels, the water was dotted with the white canvas of a great fleet, two- and three-masted schooners, brigs, brigantines, barkentines, carrying coal and grain and general cargo.

We're loading an old time schooner with coal for Duluth. She's a big craft for her day and can carry big cargo, a full fourteen hundred tons of the black diamonds. After hours of delay, wrangling, cursing, the stagings are rigged by the brawny, hairy-chested Irishmen. The buckets, each holding a few hundred pounds, are lowered to the coal pile on the dock. The dirty old gray horse, one hoof drawn up and eyes blinking lazily, is wagging his ears at a fly. He is galvanized into a start, plods away to the end of his line, and the bucket slowly rises to the staging where two burly sons of the Emerald Isle are waiting. Dump! goes the coal into a wheelbarrow and, hitching up his jean pants — his only garment — the expert sprints to the hatchway and one wheelbarrowful of coal is in the hold. Four or five days of this hand labor and the schooner is loaded. The hatches are

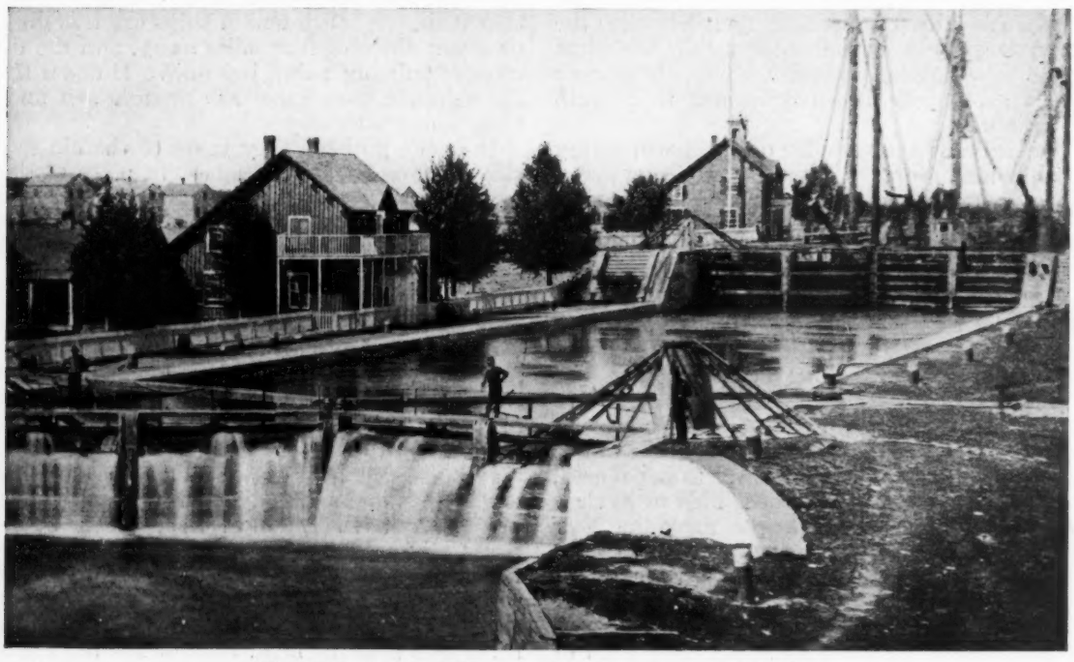
The Soo lock of today, with a 600-foot steel monster steaming out. She carries as much cargo as ten of the old-timers

clapped on and battened down, the tug passes her line and out we go into Lake Erie. The wind is ahead and it is a dead beat to the mouth of the Detroit River. Lights are few and weak, fog signals primitive, shoals and channels indifferently marked.

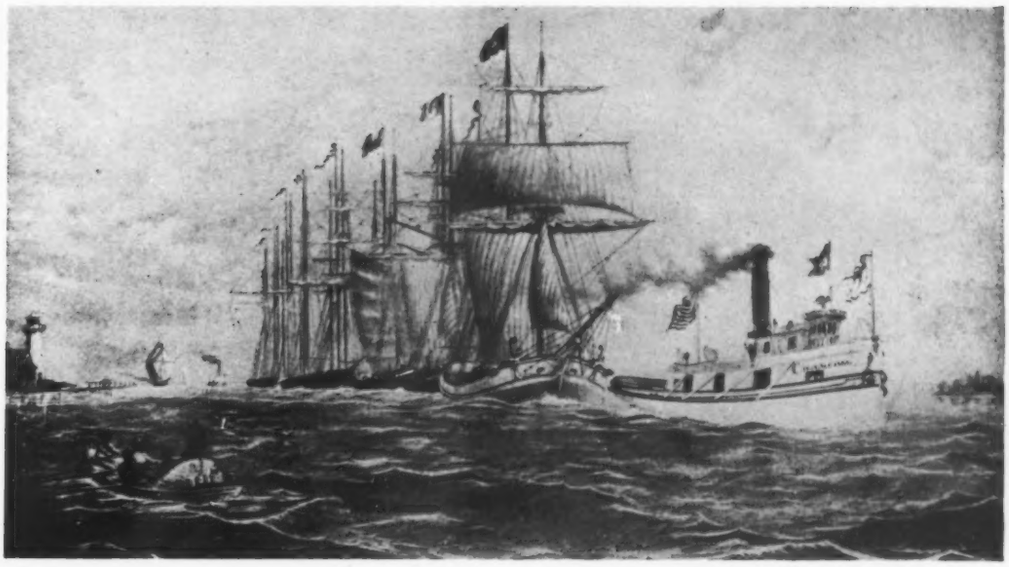
In the river at last, a tug takes hold and tows her for at least a day. Often, if the lake levels are low, she bumps her way across the Lime Kiln Crossing where there is only twelve feet of water. Great scattering lumps of rock along each bilge; a gradual slowing down until there is barely steerageway, and then the long fight against the adverse current. Finally she wins into Huron, only to find the wind ahead once more. The long grind up the lake is begun, when thick fog shuts in. The old mouth-operated fog horn is put into service, one blast for the starboard tack and two for the port, and we seesaw on through the murk, laboriously working our way to windward, until at last Lake Huron is conquered.

Then comes the old Soo, with its two locks, each 350 feet long, 70 feet wide and nine feet lift. Then out into Superior and away for Duluth. From nine to fourteen days for the voyage with fourteen hundred tons of coal. A big cargo for fifty years ago, but hardly enough to fill a corner of a single hold of one of the modern leviathans. What a contrast! No wonder the old windjammer became extinct. But she died hard, and now and then one would make a run that no steamer of the day could equal.

It was one of these unusual passages, I have always believed, which kept my father in sail after the knell of the wind ships had rung. While sailing with him in the *Nellie Redington* I could see far enough into the future to realize that the sailing vessel was doomed as a carrier. Quick and sure dispatch was the coming order and I begged him to pull bells on the bridge of a steamer instead of bracing yards on the deck of a sailing vessel, but he just would not see it.



The old Soo lock in 1875, an engineering monument of the day



The "Champion's" record tow, seven windjammers with 5500 tons of freight, a heavy pull for a tug in those days

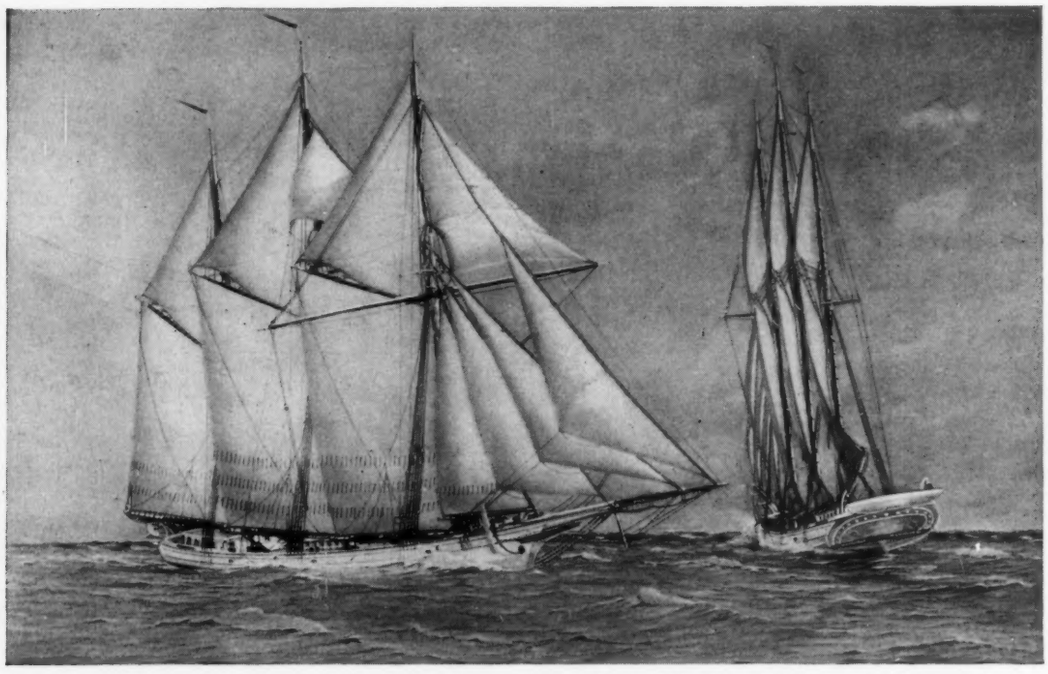
Never shall I forget that passage. We tore Lake Superior apart as we swept along before a howling nor'-wester. The gods and the wind were with us. Down Lake Huron we flew with the wind still astern. The tug *J. P. Clark*, called "Old Humpty Clump" from her crippled captain, took us alone, not waiting to pick up another boat, through the rivers. We carried sail every foot of the way and it was all that powerful tug could do to keep the towline out of the water. Realizing that there was a record being made, "Old Humpty Clump" never blew for us to cast off the towline until we were abreast of Point Pelee, on Lake Erie. The wind was still howling from the nor'west, still fair, and never had the dear old schooner had the rags packed on her as she did that night.

Not an eye was closed all night. At sunrise, we were towing up the Cuyahoga River at Cleveland. On the cabin, conning the ship, stood my old Dad. His chest was out further than I had ever seen it. Proud? Yes, more than proud. Had he not made a passage from Duluth, at the head of Lake Superior, to Cleveland, on Lake Erie, in four days? It was the feat of the time. Four days, and under sail!

"Huh!" he chuckled, "I'd like to see the damned steamboat that can beat that!"

That trip, with its marvelous record made by four days of driving the old schooner as she had never been driven before, was a misfortune for my father. On the day after Cleveland was reached, he was offered the command of the brand new steamer *Onoko* and a large interest in her. She was a fine ship and a large one for those days, being perhaps three thousand tons. The entire family begged him to accept the offer, his friends tried their hands at his conversion from sail to steam. He could not see it. He was full to the whiskers with the wonderful passage he had just made. He stuck out his

Locking through the Soo Canal sixty years ago



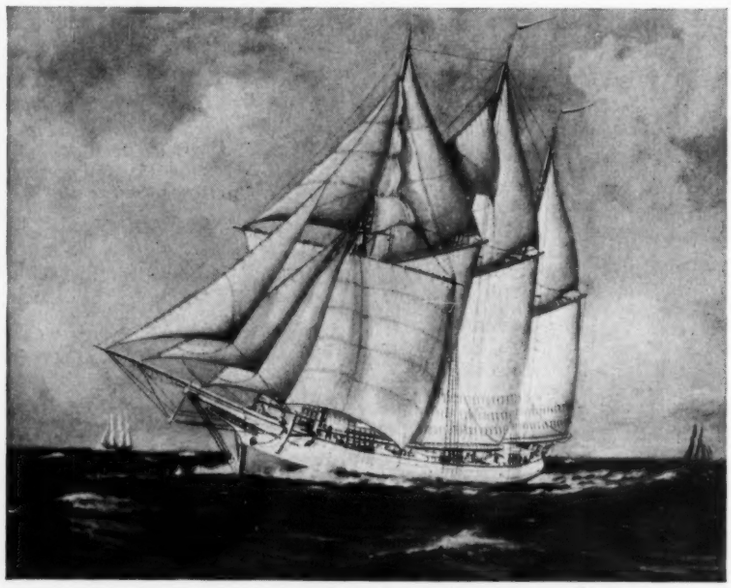
Two old timers, the schooners "Annie M. Peterson" and "Moonlight." Their skippers scorned steamers

chest and declared that he could beat any steamboat then known, most any time. Such was the pride of the old time wind sailor.

As the years passed, larger and larger ships appeared, and I could plainly see regret change the old captain. Yes, he felt it. Slowly but surely the steamers were given the preference. They were given faster dispatch while we lay alongside the pier chafing our manila hawsers. No demurrage could ever compensate for the awful delays we endured. No amount of strong language could hasten the time when we, too, could load or discharge cargo. The beginning of the end was in sight. The end of the fine sailing ships had come. No one wanted his cargo carried in a windjammer. Today they are but a memory.

But what a fight the old fellows made! Each skipper's wind ship was the very apple of his eye. He dolled her up, scraped, varnished and painted her to the limit. Wonderful figureheads were fitted, their subjects varying from beautiful women to snarling tigers. The panel work on their cabins was splendid, but — neither paint nor figureheads could make them lay closer than five points of the wind when the wind was ahead, and it was often ahead. Many a time have I seen my old Dad claw his whiskers in fury as one of the early steamers came up over the horizon, overhauled us and passed on over the rim of the world, making ten or twelve miles an hour on her course while we were bucking into it six points off. Often, before we had reached our port, we would meet the same steamer bound the other way, loaded to the hatches with her freight.

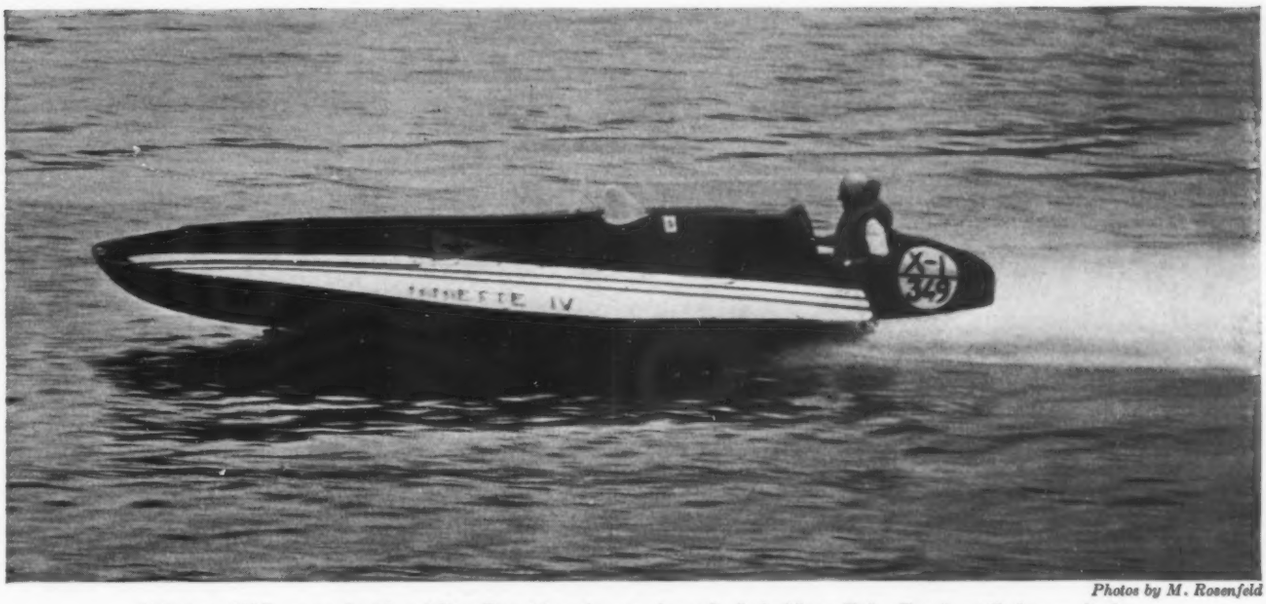
But I have seen the old masters chuckle as the wind broke fresh and fair and some schooner, packed to the trucks with bellying canvas, would overhaul and pass a steamer. Then their chests would swell and they would swear that they could beat anything that belched smoke — yet inwardly they shivered at the thought of their approaching doom. Many finally saw it, though more closed their eyes to the future. Not one of the old-timers changed to steam from choice; sheer need of bread and butter moved them from quarter deck to bridge and to pulling bells instead of trimming sail.



The "Marengo" busting the lake wide open as she tore along with a fresh beam wind

Gone are the wind ships of the Lakes. Gone, too, are the old bumboats that dropped alongside in the Detroit and St. Clair Rivers and sold gimcracks to the sailors. Gone is the reporter's boat that called and secured the names of all the vessels in the tow, to be wired to their papers and to bring comfort to wives and mothers ashore. No more does the tow round to off Lambton,

(*Continued on page 93*)



Photos by M. Rosenfeld

"Niniette IV," powered with a 6-litre Bugatti engine, performed admirably at Palm Beach until she caught fire

Let's Have Some Development

Some Lessons of the Recent International Regatta and Their Possible Effect

By EVERETT B. MORRIS

WITH the thirty-first running of the Gold Cup speed boat classic only a month away, the time seems an appropriate one to study the lessons developed by the American Power Boat Association's venture into the international regatta field in Florida, last March, and to speculate as to what effect, if any, the walloping we took from the Italian Twelve-Litre hydroplanes at Palm Beach will have on the future of America's most important hydroplane class.

Obviously, if the Gold Cup Class is to make progress in the matter of speed through engineering and hull improvements, the rules must undergo a thorough overhauling, particularly if we have any intention of continuing the international contacts so auspiciously begun last spring.

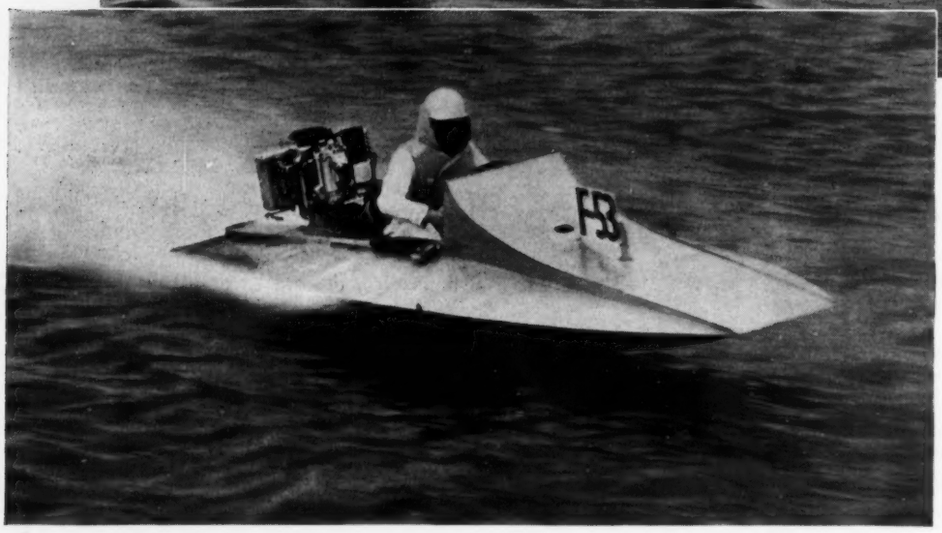
Any comparison between the Gold Cup boats and the European Twelve-Litre craft leaves our aristocrats of the water race courses looking somewhat shabby. When the venerable *El Lagarto* sallies forth at Lake George on August 5th to defend the ancient gold-plated sterling silver vase that is America's oldest speed boat prize, it will mark the last time the class operates under its present code. Next year the use of superchargers on Gold Cup engines will be permitted. That undoubtedly means new engines, because the present machines never were built to stand "blowing," and possibly new hulls designed to make the most efficient use of the added power.

Many of those interested in the development of the Gold Cup Class think that, while we are at it, we might as well go the whole way and bring the class into closer alignment with the International Twelve-Litres so that we may have cheaper as well as faster Gold Cup craft in the future — boats that can at least hold their own in racing with the best Europe has to offer along similar lines.

More about this later. The reactionary state of our Gold Cup rules was not the only point brought out by the début of the A. P. B. A. as an organizer and conductor of big-time international motor boat competition. The Florida circus might be compared to an elaborate coming out party, staged in a semi-tropical setting and festooned with the flags of seven nations. The *crème de la crème* of European motor boating society attended and so did a goodly representation of America's speed loving "400." The function was a sort of progressive party, starting in one place and finishing somewhere else, and spreading over three successive week-ends.

An international event of this scope was entirely new to American motor boating. Consequently, there were mistakes, but the success of any party must lie in the reactions of the participants. Thus, this one must be labeled a success because all of the foreign guests voluntarily expressed a desire to return for any future series of the same nature the A. P. B. A. cared to sponsor. There was entertainment aplenty, sometimes so much that it threatened seriously to interfere with the main object of the event, *viz*, to do a little racing. And, although a coming out party is probably the last place you would look for education, there was considerable to be learned both by the Americans and their European guests.

The Europeans were quick and eager to admit that they had learned something from their experiences in Florida. It is to be hoped that our motor boating enthusiasts will show a similar willingness to profit by what occurred during those three exciting weeks. This



Horace Tennes showed the way to the foreign outboard racers with his Class X Outboard Motors engine. His boat was lighter than their best

Jean Dupuy, captain of the French outboard team, used an aluminum hull of unconventional design and a 93 h.p. 6-cylinder Soriano motor with tandem propellers

applies particularly to those who have the Gold Cup rule-making authority.

The principal educational features of the Floridian fiesta, which stand out prominently were:

(1) American outboard hydroplane hulls have far outstripped the European product in their development.

(2) Italian Twelve-Litre hydroplanes are vastly superior to our Gold Cup boats as racing craft.

Proof of these statements is contained in the fact that when the Spanish and French outboard teams sailed for home they took with them four different American hulls for study, and that one Gold Cup driver was so impressed with the efficiency of Antonio Becchi's Twelve-Litre *Lia-V* that he took off the lines of the Italian boat with the idea of building a similar racer some day.

Certainly, if so much of a positive nature was developed by the series it was entirely worth while. On the negative side there was the embarrassing, at times, lack of familiarity on the part of A. P. B. A. officials with the International Motor Yachting Union rules; the Palm Beach Yacht Club's failure to make proper preparation for the visit of the traveling motor boat circus; the absence of effective organization in the American outboard team, and the Miami Beach Yacht Club's failure to keep its pre-regatta promises, a failure which left that spot off the schedule and left George H. Townsend, A. P. B. A. prexy, holding the bag for what the boys call "ten grand."

But those were mistakes which may be attributed to our inexperience in undertakings of the scope of this international competition and are not likely to be repeated. We have learned by the system of trial and error, and in the process the United States has established herself as an important factor in the field of international motor boat racing.

Adherents of the low-weight-per-horsepower theory of speed boat design came out of the internationals with powerful arguments in support of their contentions.

The American Class X outboard engines, developing about 65 horse power, drove hulls of less than 200 pounds weight much faster than the 6-cylinder, double screw, supercharged, 93 horsepower Soriano motors pushed round bilged, deep displacement aluminum boats weighing 300 pounds net.

Under ordinary conditions the only foreign outfit that stayed with the Americans was that driven by Jean Dupuy, the French captain. His all-metal hull had a flat, narrow riding surface and a hard chine. It was powered with the last word in Soriano outboard engines — a 6-cylinder, double camshaft, overhead valve machine, supercharged and equipped with aviation type carburetor and ignition. This motor developed some 110 horse power and might conceiv-

ably have beaten Horace Tennes' O. M. C. Class X engine and Brobeil hull in the international final had not a bit of driftwood bent the forward, or tractor propeller almost double near the end of the first lap of the race.

The American Class X engines, which are still very much in the experimental stage, were prey to a number of minor ills. Short circuited spark plugs and improper carburetor adjustment accounted for every Soriano breakdown. It took the French and Spanish teams, using the big Soriano engines on Soriano and de Saever hulls, several races to learn how to protect their spark plugs from getting a fatal wetting. Their hulls throw a wide, flat wash and, consequently, they were not prepared for the hosing down they took from the light American boats, which raise a terrific rooster tail astern. These dense showers of spray washed down the Soriano engines, whose spark plugs are so placed that they catch the full force of any such spray — spray so heavy that it quickly sluiced off the protecting film of castor oil on the plug terminals.

At Palm Beach the French and Spanish drivers wrapped the plug heads in adhesive tape to keep off the water and this ill-advised expedient proved disastrous. The tape was quickly soaked, the plugs shorted, and not a Soriano finished the race. Finally, spray shields were built around the plugs and thereafter the French won two races and the Spaniards one. Another example of learning by trial and error. You can bet that the next time Soriano drivers run against Americans they will have proper protection for their spark plugs.

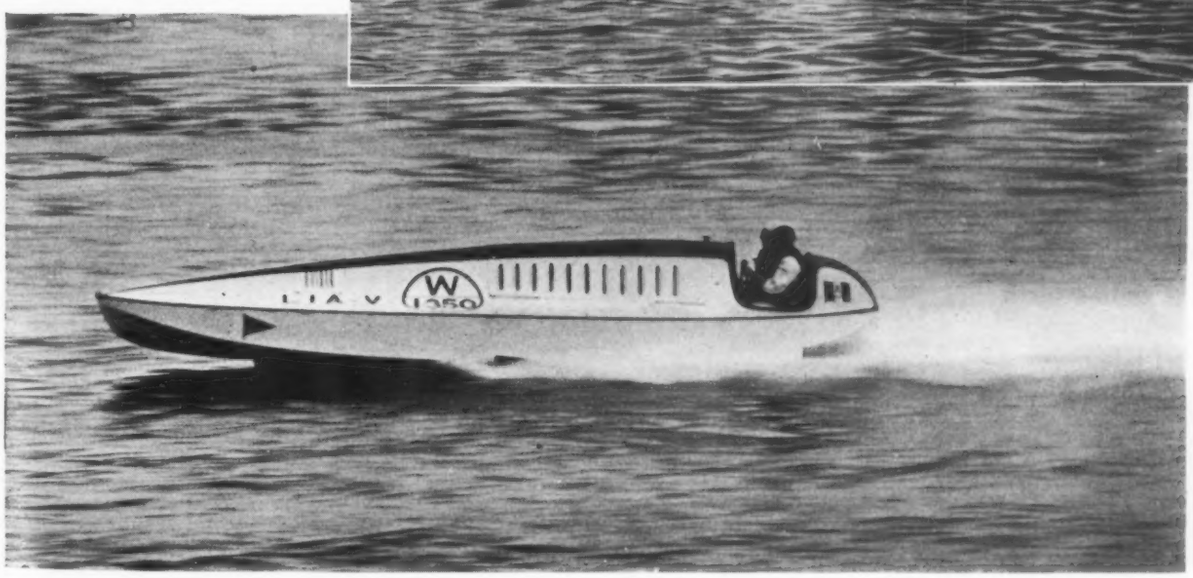
The three-race series, involving two Italian Twelve-Litres and a Six-Litre, and three American Gold Cup hydroplanes, resulted in three walkaway victories for Antonio Becchi's *Lia-V*. Everyone knew beforehand that the Twelve-Litres had more power than our Gold Cup craft, but they clung to the hope that superior hull design would more than offset this advantage. What a shock they had!

The Gold Cup engines, limited to 625 cubic inches piston displacement, measure about 10½ litres in the international rating. Most of them have increased their horse power from the manufacturer's rating of 280 to anywhere from 350 to nearly 380 by boosting the compression ratio and by numerous other tricks of the mechanic's trade. Becchi's unsupercharged Isotta-Fraschini motor pulled about 385. So the discrepancy in power was not formidable. But, whereas our engines were pushing hulls weighing at least 1,600 pounds minus motors, batteries, reverse gear and accessories, Becchi's *Lia-V* — hull, engine, tanks, gear box and what not — weighed no more than a ton. Therein lies the answer to Becchi's three straight victories.

In only one race, and then for only three laps, was Becchi forced to anything like maximum speed. *Delphine VI*, built as *Impshi* in 1925 from designs by George F. Crouch, and driven by a supercharged Gold

(*Continued on page 104*)

"Delphine VI" was the only American boat racing at Palm Beach last winter that made the foreign Twelve-Litre boats extend themselves. She went well until her supercharger ceased to function



"Lia-V" made a perfect score in the international events at Palm Beach. Complete, she weighs less than does the hull of an American Gold Cup boat

The America's Cup Yachts Under Sail

"Yankee," "Rainbow" and "Vanitie" in an informal early season brush off Newport

WHILE the three yachts from which a defender for the America's Cup will be chosen have all been under sail, there has been nothing as yet in the chance meeting of two of them to enable one to form an opinion as to their comparative speeds. It will not be until after the boats have been actually racing in the series of observation trials, which begins June 16th (subsequent to this writing), that we shall be in a position to appraise the new yacht, *Rainbow*, or to judge the value of the changes in the *Weetamoe* and *Yankee*.

The few spins the *Rainbow* had against *Vanitie* proved nothing beyond the fact that the new yacht is good. In these brushes *Rainbow's* crew was more occupied in finding the proper trim of the craft, in working out correct sheet leads, and in doing the thousand and one things that have to be done to a new boat before she is right, than in sailing a race. When *Vanitie* led the new yacht once or twice in the kind of weather in which the former revels, many jumped to the conclusion that the *Rainbow* was not so good. But such judgment is too hasty. Against *Yankee*, in an entirely impromptu brush, the same was true. The Boston boat led *Rainbow* one day, and the tables were reversed the next day.

We have it from some of the *Rainbow* crowd that their boat is good — very good, they believe, and better than the last defender, *Enterprise*. How much the changes in *Weetamoe* and *Yankee* have improved those yachts remains to be demonstrated. *Weetamoe*, with a parachute spinnaker an acre in area, may run away from the others down wind if her crew can handle this immense sail, as neither *Rainbow* or *Yankee* have such a sail in their lockers. The skippers of these craft will sit tight, we hear, until they see the luck *Weetamoe's* crew have with this circus tent before ordering one themselves. In which they are doubtless wise.

The America's Cup Committee has announced the syndicate members who financed the new yacht. The list, which includes many new names not heretofore identified with the defense of the Cup, includes Harold S. Vanderbilt, syndicate manager, Frederick W. Vanderbilt, J. P. Morgan, George F. Baker, Alfred G. Vanderbilt, William K. Vanderbilt, Gerard B. Lambert, Edward S. Harkness, H. H. Rogers, Charles Hayden, George E. Roosevelt, W. G. McCullough, Joseph P. Day, Walter P. Chrysler, Ogden L. Mills, Marshall Field, and Alfred P. Sloan, Jr.

"Rainbow" before the wind. The reverse curves in her extreme forward sections may be plainly seen

Photos by M. Rosenfeld

The Art of Going and Coming

Celestial Navigation Stripped to Bare Poles

By F. SLADE DALE

NEVER having made a perfect landfall in my life, I feel a unique qualification for adding a chapter to all that the experts have written on the subject of learning how to navigate.

This chapter of mine, pasted originally in my log-book in a lucid moment against the day when there is no one else aboard to navigate for me, would serve to refresh my own memory and would also, I confess, enable even a novice to become proficient at short notice and thus leave me free to sit comfortably at the tiller again. If it is written in words of one syllable it is because I wrote it so that I could understand it myself.

The science of celestial navigation, or nautical astronomy, is the intricate process by which you grope your way vaguely through a maze of spherical triangles, cosecants and logarithms, and finally locate your boat definitely at some exceedingly doubtful pin point on the chart. It is called a science because it gives results that are accurate, provided that the sun and stars are shining brightly, the sea is smooth, the horizon clear, and that there is no flying spray to bother the observer — when, in general, it is least important to know your vessel's exact position.

The art of Going and Coming, on the other hand, is a method of taking your vessel there and back safely in all kinds of weather, without radio beacons, Coast Guard Cutters, or passing steamers to help you, and it consists essentially in drawing a big enough circle around your estimated position on the chart. For safety's sake, it is always best to use this latter method; if the weather gets worse and worse, just keep on drawing bigger and bigger circles.

The ability to navigate accurately, by celestial means, is perhaps one of the least respected attributes of a good sailor, probably because most of it can be learned ashore out of books; and lest we place too much importance on the subject it is well to remember that with an overcast sky not even Nathaniel Bowditch himself could find his way up the coast without falling back on practical dead reckoning. Nevertheless, even the most obdurate dead reckoner has to admit that he can't reckon his way very far where there are stray currents of unknown velocities playing about, and he, like those of us who are sometimes too seasick to be interested in things like dead reckoning, might just as well reconcile himself to a brief study of nautical astronomy so that when the weather clears he can determine his latitude and longitude no matter where he has been carried. Even the humble art of Going and Coming, therefore, requires some familiarity with nautical astronomy.

However, it isn't necessary to construct diagrams of heaven and earth or to know the Greek alphabet or the signs of the zodiac, in order to navigate; indeed, the reason that most yachtsmen don't know more about celestial navigation is probably because they have been scared away by the formidable prefaces in the books they have bought. The way to be sure of learning how to navigate, without becoming discouraged by all the big words, is just to start navigating by some simple rule of thumb, and then pick up the deep theories and refinements afterwards to acquire intelligence on the subject. In this way the various terms used in nautical astronomy gradually take on real meaning and, when the time comes to learn more advanced methods of navigation, you have a clear mental picture of what you are doing and why you do it. It is for this reason, rather than because of any inherent advantages in the simplified methods, that it is well worth while to become thoroughly proficient in a few rule of thumb procedures. So, before worrying about Sumner, St. Hilaire, and Dreisonstok, let us first learn to navigate so that we can Go and Come with the rest of them. We shall see that by a simple procedure latitude can be obtained with some degree of precision, and longitude with sufficient accuracy for ordinary cruising.

Now, in nice clear weather, when the sun obligingly shines at noon every day, it is an easy matter to (1) read the sextant angle when the sun reaches its highest point and call this the meridian altitude, then (2) subtract this meridian altitude angle from 89° 48′ to get the Zenith Distance angle, then (3) apply to this Zenith Distance the Declination of the sun as given in the current Nautical Almanac for that particular day, and (4) record the answer in the log book as your Latitude.

This is all so easy to do, not even requiring a timepiece, that you might suspect some flaws in it but, notwithstanding its abbreviations and approximations, it will give you your latitude within a few miles, and many cruises are made today, as in the old days, by this method alone, without any longitude determination at all. So don't ever say that celestial navigation is essentially difficult. By the above method you can wend your sunny way clear around the globe — using a few judicious circles of position in stretches of cloudy weather.

Step (3) above could stand a little explanation if you want details enough so that you can walk right out this noon and locate the end of your dock. To find the declination of the sun turn to Page 4 of the American Nautical Almanac for 1934, which may be obtained at any nautical supply house or from the Superintendent of Documents, Washington, D. C., for 35 cents, and in the third column you will find twelve values for the declination on Monday, January 1, 1934. These declinations, having minus signs in this instance, are simply the number of degrees that the sun is south of the equator, and they are tabulated for the corresponding hours of Greenwich Civil Time (G.C.T.) listed in the first column; to pick out the correct declination, it is necessary to know what the Greenwich Civil Time was when you took your observation for the meridian altitude of the sun. If you had a clock on board and noted what time it was when you took your noon sight, you can convert this ship's clock time into Greenwich Civil Time by adding or subtracting the necessary number of hours determined by your particular time zone. That is, if your clock was set to Eastern Standard Time in the United States, you would add five hours to get Greenwich Civil Time, or add eight hours if your clock was set to Pacific Time, etc., remembering that Greenwich Civil Time starts with the zero hour at midnight and runs through 24 hours. If you are cruising with no timepiece on board at all, you can estimate your longitude roughly — within

several hundred miles will do — and for every 15 degrees of west longitude add one hour to 12 o'clock to get the corresponding Greenwich Civil Time, or subtract one hour from 12 o'clock for every 15 degrees of east longitude. For example, if you guess that you are in 66° west longitude when you take your noon sight, it will be about 4.4 hrs. past noon at Greenwich, or approximately 16 hrs. 24 min. G.C.T., and the declination corresponding to this G.C.T. can be obtained from the tables by inspection.

To "apply the declination," as mentioned in step (3), the following should be remembered: (a) When you read the sextant angle, note whether the sun is bearing north of you or south of you; if the sun is north of you, your Zenith Distance is south, while if the sun is south of you, your Zenith Distance is north. (b) When looking up the sun's declination in the Nautical Almanac a plus sign (+) indicates north declination and a minus sign (−) indicates south declination. (c) If the Zenith Distance and Declination are *both* north or *both* south, add them together to get your latitude; if one is north and the other is south, subtract the smaller from the larger and mark the resulting latitude with the name of the larger, thus giving north latitude or south latitude as the case may be.

It is very much like making out an income tax, only it's considerably quicker; old-timers who continually Come and Go are quite casual about it all, and it takes a yachtsman to make a mystery of it. Pete Jenness tells me of an instance this past winter when he was taking a noon sight to get a check for the skipper of a four-masted lumber ark; as he went on deck Pete chanced to remark that he'd be a little late for dinner while he waited for the sun to cross the meridian. "To hell with the meridian, then," said the skipper, "call it the noon reading when the cook sings out and then come below and eat. I'm a man that's pretty particular when it comes to doing things on time."

This noon sight for latitude is invaluable in the practice of Going and Coming, and for greater accuracy than the above described "89° 48′ method" you can make more precise corrections than have been lumped together under this rule, if you want to, but first of all you should practice taking sights from small boats in rough water to determine whether you are expert enough in handling the sextant to make greater accuracy in the calculations worth while. I confess that I have shown no improvement over the day I took my first sight, but then I made a perfect observation the first time and that is very difficult to improve upon. My first gaze through a sextant revealed no sun and no horizon anywhere in sight, but I did discern a Coast Guard Cutter headed straight for us, and in twenty minutes I knew my latitude and longitude within a hundred yards. I have never done as well again. Since that time my efforts to make a dancing lower limb coincide with an obscure horizon, on a certain tick of a jostled clock, have influenced my outlook on things; I no longer seek perfection but simply aspire to the rank of Goer and Comer. I am willing to navigate celestially if it is necessary in order to get somewhere that I want to go, but I never expect to go somewhere for the sake of a chance to navigate.

Perhaps my first lesson in the art of Going and Coming was learned under old Captain Barlow aboard the four-master *Herbert L. Rawding* back in 1926. We were coming up from the Straits of Florida with 1,200 tons of cement for New Bedford, and one morning off the Jersey coast I asked Captain Barlow where he thought we were; we hadn't had a clear sight of the sun in several days of fog and clouds and, as my own dead reckoning had become pretty doubtful, I thought I'd better ask the captain where we were before he asked me. He said we were about off Sea Girt Light, and as that put us only 22 miles below Sandy Hook I ventured the remark that, if we held our course in the fog, we might run square into Long Island before we knew it. Captain Barlow replied that that wasn't possible, and explained that before we could run into danger we'd see a lot of garbage in the water. About an hour later we did run into a mess of orange peel, bottles, crates, and rubbish of every description and, thinking that we must be pretty close to New York, I called out the skipper. Captain Barlow came on deck, looked over the side as if to analyze the waters, and then remarked: "We're fu'ther than I tho't for; we'd better put her off for Montauk." Only a few minutes later Fire Island Lightship loomed up off to port and, instead of running ashore on the beach as we would have done without the garbage warning, we went gaily on our course for Montauk. All hands seemed thoroughly satisfied that his original method of making a landfall had worked out so well again.

We can determine longitude almost as easily as latitude if we stick to a simple rule of thumb method, although for longitude a timepiece is necessary in addition to the sextant and Nautical Almanac. A reliable watch will serve the purpose in the absence of a chronometer, and it may be rated by listening to radio time signals such as are broadcast accurately by station WOR on every even hour throughout the regular broadcasting periods.

It is not even necessary to understand what longitude is in order to determine it, and you can skip this paragraph entirely and still be able to navigate, but this is the way I explain it to myself: The "mean sun" is a fictitious sun which moves at a uniform rate of 360 degrees every 24 hours, or 15 degrees every hour, around the earth. The true sun does not move uniformly relative to the earth but is always speeding up or slowing down, sometimes being ahead of the mean sun and sometimes behind, in amounts varying from zero to about 16 minutes. The difference in time between the mean sun and the true sun is given by a correction known as the "equation of time," tabulated for every even hour of the year in the Nautical Almanac. Now the *difference in longitude between two places may be thought of as the interval of time required by the mean sun to pass from the meridian of one place to the meridian of the other place.* So the determination of a ship's longitude can be said to consist essentially in finding out how long it would take for the mean sun to pass from the meridian of Greenwich, which is the zero of longitude, to the meridian of the ship; or, if the ship is east of Greenwich, how long it would take for the mean sun to pass from the meridian of the ship to the meridian of Greenwich. When this interval of time has been determined, it can be converted into degrees of longitude by remembering that every hour of travel by the mean sun is equivalent to 15 degrees of longitude. Now if we can tell the time of day when the true sun crosses the meridian of our ship, we can apply the equation of time and tell the time of day when the mean sun would cross our meridian. Then, if we have a clock on board that was set at exactly 12 o'clock when the mean sun went across the meridian at Greenwich (which is the way chronometers are set), all we have to do is to find out what time this clock would show when the mean sun crosses our ship's meridian. The difference in time shown on this clock is our longitude in hours, minutes, and seconds, which can readily be converted into degrees, minutes, and seconds of arc, to give our longitude as required.

G. C. T.	Equation of Time	Sun's Declination	Sun's G. H. A.	Equation of Time	Sun's Declination	Sun's G. H. A.	Equation of Time	Sun's Declination	Sun's G. H. A.
	Sunday 1			Thursday 5			Monday 9		
h	m s	° ′	°	m s	°	° ′	m s	° ′	° ′
0	−4 13.9	+4 11.3	178 56.5	−3 2.0	+5 43.5	179 14.5	−1 53.1	+7 14.2	179 31.7
2	4 12.4	4 13.3	208 56.9	3 0.6	5 45.4	209 14.9	1 51.7	7 16.0	209 32.1
4	4 10.8	4 15.2	238 57.3	2 59.1	5 47.3	239 15.2	1 50.3	7 17.9	239 32.4
6	4 9.3	4 17.1	268 57.7	2 57.6	5 49.2	269 15.6	1 48.9	7 19.8	269 32.8
8	4 7.8	4 19.1	298 58.0	2 56.1	5 51.1	299 16.0	1 47.5	7 21.6	299 33.1
10	4 6.3	4 21.0	328 58.4	2 54.7	5 53.0	329 16.3	1 46.2	7 23.5	329 33.5
12	4 4.8	4 22.9	358 58.8	2 53.2	5 54.9	359 16.7	1 44.8	7 25.4	359 33.8
14	4 3.3	4 24.9	28 59.2	2 51.8	5 56.8	29 17.1	1 43.4	7 27.2	29 34.2
16	4 1.8	4 26.8	58 59.6	2 50.3	5 58.7	59 17.4	1 42.0	7 29.1	59 34.5
18	4 0.2	4 28.7	88 59.9	2 48.9	6 0.6	89 17.8	1 40.6	7 30.9	89 34.8
20	3 58.7	4 30.7	119 0.3	2 47.4	6 2.5	119 18.2	1 39.2	7 32.8	119 35.2
22	3 57.2	4 32.6	149 0.7	2 45.9	6 4.4	149 18.5	1 37.9	7 34.7	149 35.5
H. D.	0.8	1.0	... ...	0.7	1.0	... ...	0.7	0.9	... ...
	Monday 2			Friday 6			Tuesday 10		
0	-3 55.7	+4 34.5	179 1.1	−2 44.5	+6 6.3	179 18.9	−1 36.5	+7 36.5	179 35.9
2	3 54.2	4 36.4	209 1.4	2 43.0	6 8.2	209 19.2	1 35.1	7 38.4	209 36.2
4	3 52.7	4 38.4	239 1.8	2 41.6	6 10.1	239 19.6	1 33.7	7 40.2	239 36.6
6	3 51.2	4 40.3	269 2.2	2 40.1	6 12.0	269 20.0	1 32.4	7 42.1	269 36.9
8	3 49.7	4 42.2	299 2.6	2 38.7	6 13.9	299 20.3	1 31.0	7 43.9	299 37.3
10	3 48.2	4 44.1	329 3.0	2 37.2	6 15.8	329 20.7	1 29.6	7 45.8	329 37.6
12	3 46.7	4 46.1	359 3.3	2 35.8	6 17.7	359 21.1	1 28.3	7 47.7	359 37.9

Page from the Nautical Almanac showing the sun's declination for April 5th

One method of determining when the true sun crosses the ship's meridian is to observe the sun through the sextant; when the sun reaches its highest angle, it is on the meridian. The difficulty with this method is that the angle changes so slowly when the sun is close to the meridian that for a minute or so it appears to stand still, and thus it is impossible to tell accurately at just what instant it crossed the meridian. However, the sextant can be used at a time when the sun's angle is changing rapidly, as described in the following paragraph, to determine with a fair amount of accuracy the instant of the sun's transit. It must be remembered, however, that this method of determining longitude is for Goers and Comers and not for those racing to Bermuda. It is a recognized method which has legitimate uses, but perhaps its greatest merit lies in the fact that it is extremely simple and offers an easy way of enticing the novice into the art of navigating. So if, having mastered this method, you go out and sign up as navigator in the race to Bermuda, don't blame me if they send the Coast Guard out to look for you; the only advantage that I can think of offhand for using this simplified method in the Bermuda Race would be that it might take you so long to find the island that you would have ample time to practice up on more accurate methods along the way.

To use the method of "equal altitudes" for determining longitude, you simply (1) take an observation of the altitude of the sun with the sextant about half an hour or so before the sun reaches its highest point on your meridian and record the exact time, to the second, of the observation; then (2) as the sun falls after crossing your meridian observe the sun through the sextant and the instant it reaches the same angle that you observed previously you record the exact time of your watch again; now (3) determine the exact halfway time between these two recorded times of observation and call this the watch time that the true sun crossed the meridian where you stood; then (4) convert this watch time, when the sun crossed your meridian, into Greenwich Civil Time of day and call this the "Greenwich Time of day of True Noon at Ship," or call it anything simpler that you can think of; then (5) in the G.C.T. column of the Nautical Almanac, for that particular day, use the figures of your Greenwich Time of day of True Noon at Ship and find opposite them, in the adjoining column, the corresponding value of the equation of time; then (6) apply the equation of time in accordance with the sign given in the Nautical Almanac, plus or minus, to the Greenwich Time of day of True Noon at Ship to obtain the Greenwich Time of day of Mean Noon at Ship; then (7) depending on which is larger, subtract 12 hours from this Greenwich Time of day of Mean Noon at Ship, or subtract the Greenwich Time of day of Mean Noon at Ship from 12 hours, and the difference is west longitude or east longitude, respectively, expressed in hours, minutes, and seconds of time; then (8) convert these hours, minutes, and seconds of time into degrees, minutes, and seconds of arc, by using Table V on page 218 in the 1934 Nautical Almanac (if you can't do it otherwise), and (9) record the answer in the log book as your Longitude, west or east in accordance with step (7).

If there's anything difficult about all this it's primarily in the reading of it; all kinds of Goers and Comers can put the procedure into practice without wrinkling an eyebrow, although, to be sure, I did hear a big black Jamaican negro say one time with a puzzled look that now he knew sure enough what it meant to die by degrees. But you don't have to understand the terms to use them; so just follow through the various steps in the order indicated and you can't help arriving at the answer if you grind the crank long enough. On one cruise that Pete Jenness and I were making before we had any chapters on navigation in our log book, we took a sight of the sun, preserved it carefully until we reached port some days later, mailed it five hundred miles to Pete's father up in Portland, and ten days later the answer

caught up with us at our next port of call. It would have been more efficient if, instead of taking the sight, we had taken Pete's father.

The following remarks might serve as a supplement to the steps enumerated above, much of what follows being a sort of miscellaneous collection that has been gleaned from the writings of experts and put into the language of the Goers and Comers. Time of day at any point is really nothing more than a measure of the interval of time that has elapsed since the sun made a noon crossing of the meridian at that point; the longer ago that the sun crossed the meridian, the greater, or later, is the time of day. If the interval of time is measured in reference to the movement of the true sun which we see in the sky, the time of day is true sun time or "apparent" time. If the interval of time is measured in reference to the mean sun, which is an imaginary but uniformly moving sun, the time of day is mean sun time. Greenwich time is time of day at Greenwich, and it can be expressed in reference to either the true sun or the mean sun, being known as Greenwich Apparent Time or Greenwich Mean Time, respectively. Because the true sun does not move uniformly, relative to the earth, our clocks are based on the mean sun; our measure of *elapsed interval* is always expressed, therefore, in hours, minutes, and seconds of mean time, even though the designation of instantaneous *time of day* may be with reference to either the true sun or the mean sun.

In step (1) dealing with longitude, the usual rule governing the first or forenoon sight is to take the sight approximately as many minutes before noon as there are degrees of latitude in your ship's position. To get the halfway time in step (3) just add the two watch times together and divide by 2, remembering, however, that 1.00 P.M. on the watch is really 13 o'clock in such an addition; 2.00 P.M. watch time would be 14 o'clock, etc. Step (4) converts watch time into Greenwich Civil Time in the same manner that was described in the explanation of step (3) in the latitude determination; it should be remembered, however, that in converting any watch time to Greenwich Civil Time it is, of course, necessary to correct the watch for any error that it has accumulated since it was last set, in addition to correcting it for its standard time zone setting. In step (7) the 12 hours which we mention is the Greenwich clock time of day when the mean sun crossed the meridian at Greenwich.

Greenwich Civil Time is simply the time of day shown by a clock or chronometer, which runs at the same rate as the clocks to which we are accustomed, and which shows the zero hour exactly 12 hours before the mean sun makes a noon crossing of the meridian at Greenwich. Greenwich Civil Time runs from zero up to 24 hours, instead of having two 12-hour periods distinguished by A.M. and P.M. Ships' chronometers are set to Greenwich Civil Time; but they ordinarily register only up to 12 hours and it is necessary to take their face readings with this fact in mind, as otherwise you might be 12 hours out if you read the actual face time. In the Nautical Almanac the sign, + or −, in front of the Equation of Time indicates whether the correction should be added to or subtracted from the G.C.T., which is the Greenwich time of day by the mean sun, in order to get the Greenwich time of day by the true sun. *The plus sign shows that the true sun is ahead of the mean sun in their travels around the earth, and the minus sign shows that the true sun is lagging behind.*

This is very important to understand but unfortunately it is almost never stated simply enough in books on navigation. For example: If the equation of time is +2 min. 5.2 secs. at 19 o'clock G.C.T. on June 3, 1934, it means that when the clocks at Greenwich, or ships' chronometers, show exactly 19 o'clock the true sun is at that instant 2 minutes and 5.2 seconds ahead of the mean sun in the course of their travels. The "Greenwich Apparent Time," therefore, which is the time of day based on the position of the true sun, would be 19 hrs. 2 min. 5.2 secs., because if you looked in the sky at the true sun you would see it, on June 3rd, further advanced than the mean sun, that is, nearer sunset, and consequently the time of day would *appear* to you to be later than if you looked at the imaginary mean sun. So when the sign is plus you add the equation of time to the Greenwich Civil (mean sun) Time, or Greenwich chronometer time, to get the Greenwich Apparent Time, which can also be called the Greenwich True Sun Time. However, and this is the important point here, the true sun on June 3rd, 1934, being ahead of the mean sun, will pass over a point on the earth's surface sooner, or earlier by the clock, than the mean sun, so if the mean sun crosses a certain meridian at 19 o'clock by the Greenwich chronometer, the true sun crossed that same meridian on June 3rd, 1934, 2 minutes and 5.2 seconds earlier, or at 18 hrs. 57 min. 54.8 secs. o'clock by the Greenwich chronometer. In other words, when the equation of time has a plus sign, we learn that the Greenwich Apparent (true sun) Time is *later* than the Greenwich Civil (mean sun) Time, but in such a case the actual passage of the true sun over a certain point is *earlier* than the passage of the mean sun over that same point. It is this sort of thing which has made me paste a chapter on navigation in my log book.

A number of variations and alterations in connection with the procedures which we have discussed may occur to the reader, such as the correction to be made for the travel of the vessel between the two "equal altitude" sights, or the method of predicting the time of day when the sun will reach its greatest altitude at the ship, and the procedure of working sights backwards at a known longitude to check your watch or chronometer. These are easy to do and to understand once the fundamentals are familiar. And any good book on navigation will lead the way clearly into more advanced matters. An excellent book for study is *Navigation and Nautical Astronomy*, by Benjamin Dutton, fifth edition which is used as a textbook at Annapolis.

But don't put off learning how to navigate until you get around to reading such a book or you may never learn to navigate at all.

\+ + +

Following are the latitude and longitude determinations worked out in full from actual sights made by the writer on the boardwalk at Coney Island on April 5th, 1934.

LATITUDE BY 89° 48′ METHOD

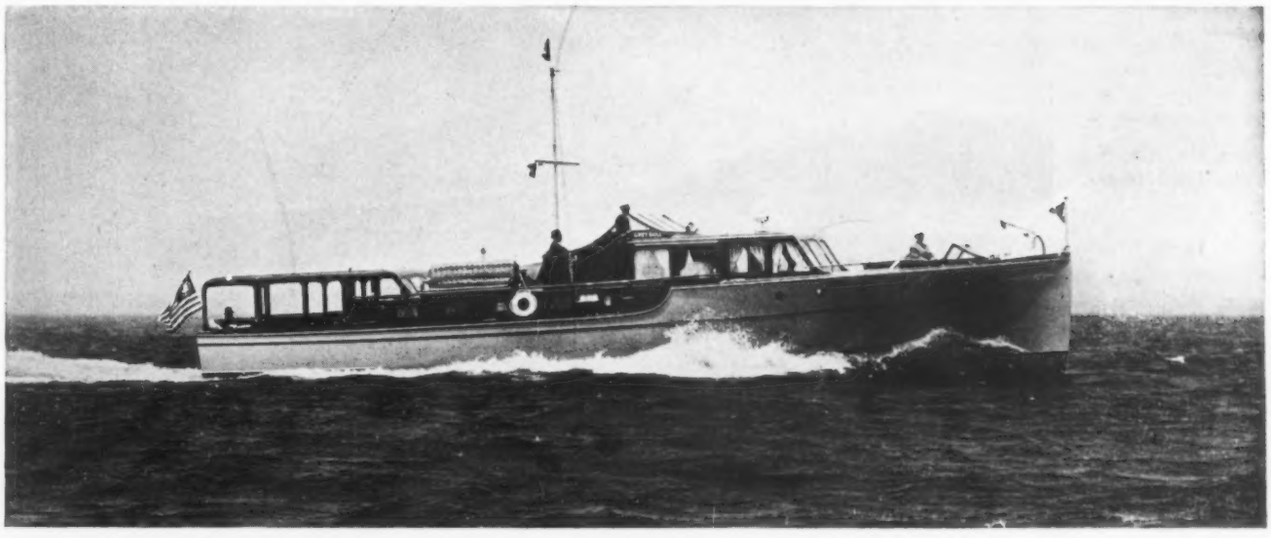
Constant (includes corrections)	89°	48′
Subtract maximum observed altitude	55	13
Zenith Distance (is north because sun bears south)	34	35
From Nautical Almanac, Declination is north, so add it	5	59.6
Sum	39	94.6
or Latitude, north	40°	34′ 36″

(*Continued on page 104*)

"Grey Gull"

The Newest Cruiser Commuter

This latest addition to the fleet of fine motor yachts was designed and built by the Consolidated Shipbuilding Corporation, Morris Heights, New York. She is 66' 6" long, 14' beam, and 4' draft. Decks and joinerwork are teak, and she is double-planked with cedar. Two 6-cylinder, 300 h.p. Speedway motors give a cruising speed of 20 m.p.h. All controls are centered on the bridge



Raking housefronts and windshields give a pleasing streamline effect that goes well with the yacht's handsome model. Forward cockpit, deck dining saloon, after cockpit, and bridge deck provide lounging space for fair weather or foul, while below decks is a comfortable double stateroom with adjoining bath and dressing room. Pullman berths in the deckhouses give additional sleeping accommodations. Galley and crew's quarters are forward

Bermuda

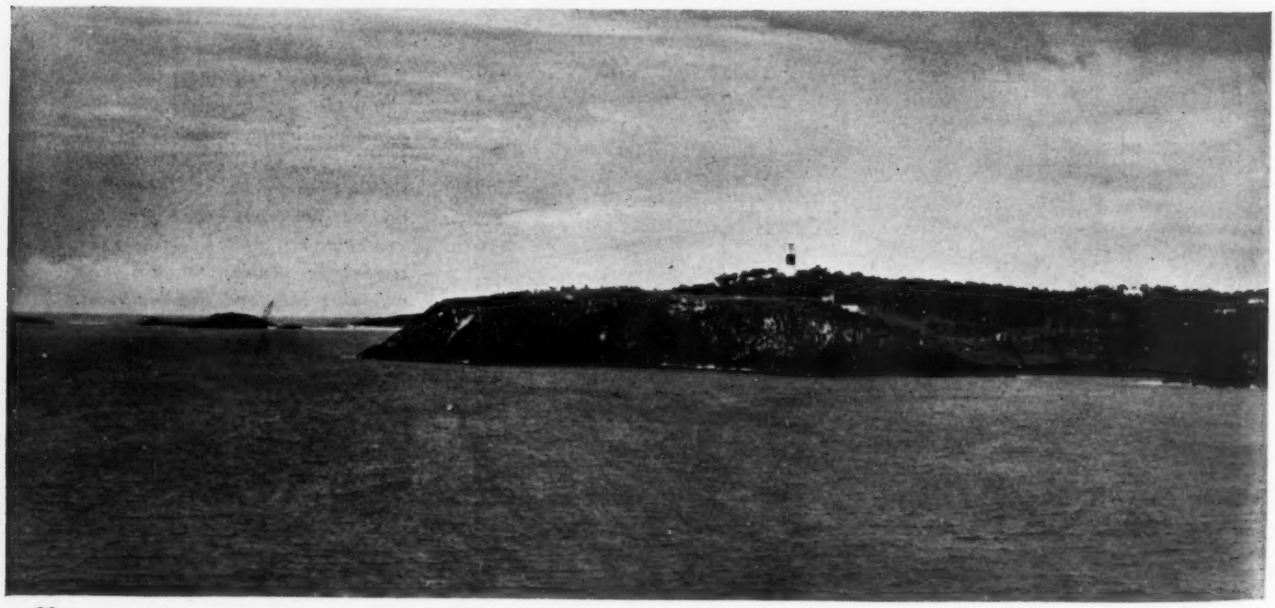
A Yachting Paradise

The shore line is always interesting, with deep indentations in the soft rock formation

At left, hand-lining from a Matthews sailer near Great Sound

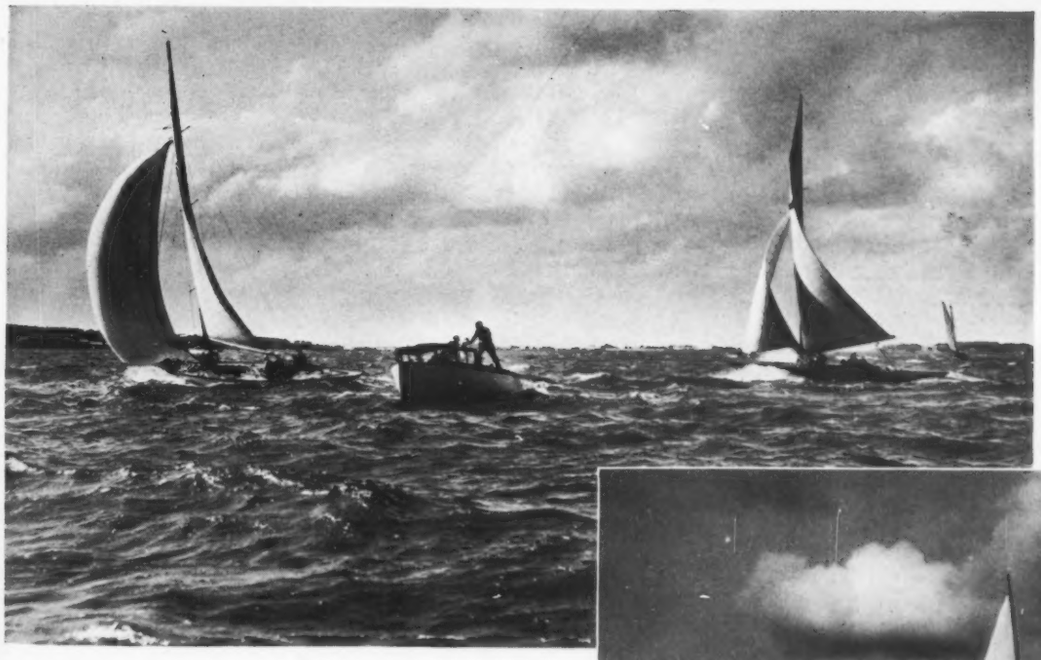
Among the islands of Hamilton Harbor

St. David's Head and lighthouse, off which the ocean racers finish their 650-mile voyage



Six-Metre yachts during the recent international races passing the British cruiser "York"

Photos by
M. Rosenfeld



When a spinnaker is a handful. Six-Metres "Lucie" (left) and "Viking"

Neck and neck for the finish line

In the Motor Boating World

By

GEORGE W. SUTTON, JR.

UR British friends seem a bit discouraged about the future of the Harmsworth Trophy races and are busy playing with the idea of a new class to take its place. I have had a lot of correspondence on this subject with L. V. Head, of *The Yachting World*, and young Lord Forbes, who seems destined to be England's man of destiny in motor boat racing, and who may be over here in July to try his special Soriano-engined outfit in some of our regattas. Here is an excerpt from a recent letter from Lord Forbes:

"There is very little news over here and motor boat racing is very dead. There are no 12-litre liquid-cooled aircraft motors so I am afraid that England will not be able to compete in that class. I am told that 12 litres is an uneconomic size for a liquid-cooled aircraft motor and that in future they will all be about 24 litres. Head and I are trying to find out how a 24-litre class would be received in U. S. A. In England we can get any amount of Napier engines cheap so that it would be a very good class for us. The Harmsworth could easily be run for this class since the boats would all do over 100 and there would be plenty of them since these boats would be cheap to build. In England now nobody is interested in the Harmsworth and it is thought that if there is not a race next year, that will be the end. Motor car racing is booming over here and it seems extraordinary that nobody can be found to race motor boats."

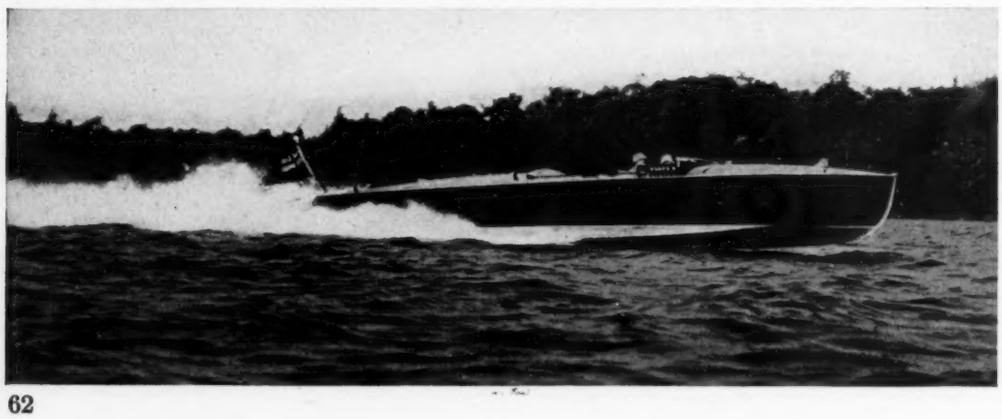
I have interviewed many American motor boat solons on this idea, including Gar Wood, C. F. Chapman, George Townsend, Eddie Edenburn and others. They are unanimous in thinking the new class should be an excellent one for international racing if raised to 25 litres. This would let in our old Liberty engines, the only motors existing in this country suitable for such purposes and on which considerable development work would be necessary to make them match the Napiers and other foreign machines. Nowhere, however, do I find the slightest sentiment in favor of discontinuing the Harmsworth or substituting any other class for it. Gar Wood would certainly not undertake the labor and expense of stepping down out of his cherished unlimited horse power monarchy to experiment with a smaller, slower class, although he admits that the 24 or 25 litre boats might make fine racing, even on a program topped by the Harmsworth contest, if entries could be secured from England, Italy, France and America (including Canada). I'm going to try to interest George Reis in this class next year.

\+ + +

There is something new under the sun — the 225-cubic inch hydroplane class fathered by John L. Hacker, designer of many famous speed boats, and adopted officially by the A.P.B.A. at its annual meeting last fall. At least three of these new craft, from which a speed of between 50 and 60 miles an hour is expected, will be seen in the regattas at Havre de Grace, Baltimore, Stone Harbor and Ocean City, N. J., one of them driven by Mrs. Paul Burnham, winner of the inboard runabout class in last year's Albany to New York race in her 125-cubic inch hydroplane. If successful in the early season events, you may be sure more boats of this class will be rushed through and places will be found for them on the Gold Cup, President's Cup, National Sweepstakes and other regatta programs. It is high time we had a new and inexpensive class to take the place of the wonderful little 151-cubic inch hydroplanes. In my opinion, that was the finest racing class ever developed in American motor boating and it is a pity that it was put out of business by rank commercialism. The 125-cubic inch class seems destined for a good season but the new 225's, with their higher speed and their low cost of around one thousand dollars for hull and engine, should be much more popular and should provide some excellent competition.

\+ + +

For years I have been proclaiming that the first outboard races in the world were held in Detroit in 1924 and the second at Manhasset Bay in 1925. Pictorial evidence from England seems to confute me. Here on my desk are photographs and statistics of the first official outboard race at the Chelsea meeting of the British Motor Boat Club — in July, 1923! There were ten entrants and the winner achieved the sensational celerity of seven miles per hour. The rest of the boats were so slow that spectators did not know a race was taking place at all.



Speeding at fifty miles. The 36-foot "Wilmer II" burning up the St. Lawrence. This hydroplane was recently repowered with a Scripps V-12 motor which develops 300 h.p. at 2400 r.p.m. She is owned by R. Y. Murdock

E. Levick

Judicious use of the engine may spell victory in a race for auxiliaries

Get After That Motor!

How to Get More Miles per Gallon in an Auxiliary Race

By SAMUEL WETHERILL

IN THE past ten years or so a new kind of race has come into prominence, and is gathering supporters from year to year. I refer to the so-called auxiliary races, in which only genuine auxiliary cruisers are eligible to compete, and in which both sails and motors are used in an effort to be first across the finish line. So we have two sources of driving power — sails, and motor. Having been a contestant in several of these races, and lucky enough to have won a couple, perhaps a few remarks upon the "motor angle" of auxiliary races will help the uninitiated sailing man to get the necessary performance out of his gas-eater to be up among the leaders at the finish.

As most of us know, each contestant in an auxiliary race is allotted a certain amount of fuel, according to the size, shape, and displacement of the boat. A big, heavy craft gets more fuel than a smaller, leaner craft, as it obviously requires more power, and therefore more fuel, to drive the big boat a given distance than it does her smaller, lighter sister. And right there is the point. The idea of the fuel allowance is to give each craft enough fuel to enable her to complete about half the course under power. She must go the rest of the way under sail.

Now, suppose there are two sister ships in the race, each with an identical motor installation. If the motor on Boat A is in bang-up shape, then A will travel half the course with ease — maybe a bit more. If the motor on Boat B is in poor condition — leaky valves, worn piston rings, and so on — then it stands to reason that Boat B will not go as far on her fuel allowance as Boat A. Other things being equal, Boat A will easily take the measure of Boat B by plugging along in a calm while B is doing nothing at all. Wherefore, it behooves each contestant to have his motor and motor accessories in the best possible condition — he must get just as many miles per gallon as is humanly possible, and the way to get them is to have the motor fit and ready for the job. Let's see what can be done in this direction in order to have a real shot at a prize.

Let's take the motor itself for a starter. Compression means power and efficiency — miles per gallon of gas. Valves must be ground in to a nice fit, and seat properly. If the motor has had considerable usage, the piston rings may be worn, or clogged up with carbon and gummy sludge so that they don't do their duty. A thorough clean-up will help, but if the rings are badly worn, new ones must be installed, and the motor "run in" until they make a tight fit. A leaky gasket may also cause a loss of power and efficiency. Fit a new one, and make it gas-tight.

The entire ignition system must be in perfect shape. See that the battery is full up with electrolyte, and fully charged. Go over the wiring carefully. A partly broken wire may end in disaster, and old, oil-soaked wires cause partial short circuits, and ignition failure at a critical moment. Clean and tighten all connections. See that your distributor points are making proper contact, and that the distributor gets its drop of oil occasionally. If spark plugs are old, install a new set — they don't cost much, and often add a lot of pep to the old coffee mill. Examine any switches and be sure that they make clean, firm contact. Above all, be sure that the entire ignition system will remain dry in all weathers — a few drops of water can stop the motor without warning, and sometimes it's an awful job to get it going again.

The heart of the motor is the carburetor, in which the fuel is mixed with air to form an explosive mixture. The carburetor must perform without fail, and in the most economical manner possible, or all is lost. The best thing to do is to take it apart, clean it thoroughly, and replace

any worn parts. Most carburetors have a small strainer where the fuel line attaches. Clean it thoroughly — these fine mesh strainers have a way of gradually clogging up with a sort of mud, which finally causes misfiring from a too lean mixture — or complete stoppage of the motor. Go over throttle connections, and be sure the throttle is working smoothly and surely.

Working back from the carburetor, overhaul your large strainer, cleaning it thoroughly and replacing the

wire gauze if it is broken anywhere. Disconnect fuel line, and run some gasoline through it, then blow through it — be sure it is clean, and that there is no obstruction to the full and natural flow of the fuel. Be sure your gasoline tank is free of dirt, sludge, scale or water. Most gas tanks collect some water in them, due to condensation. Get it out. Your strainer may catch it, but don't rely too much on the strainer.

A word about your fuel line. It should be so installed that fuel will feed freely to the carburetor not only when the boat is on an even keel, but when she is heeled well over, on either tack. If it won't do this, change the gas line so that it will, for it's dollars to doughnuts that you'll want to run your motor while bucking to windward, and if the gasoline doesn't get to the carburetor . . .

Crooked exhaust lines cause a great loss in power and efficiency. Run your exhaust line as straight as possible. Where bends are essential, use 45 degree L's, not 90 degree. Be sure that your exhaust line — and muffler — are absolutely clear of rust, dirt, soot and carbon. Any obstruction in the exhaust line means back pressure, loss of power, and loss of efficiency.

Overhaul your water pump, fill the grease cups with waterproof grease, and take up half a turn on the gland to be sure there is no water leak. If your pump fails, for even a moment, overheating may put your motor completely out of commission, and run up quite a repair bill into the bargain.

A slipping clutch is a cussed affair, and certainly won't help win an auxiliary race. See that it is properly adjusted, and properly lubricated in order that it may do its job without chance of failure.

Change the oil in your crankcase just before the race. Old oil is not only an inefficient lubricant, but may do a lot of harm to the motor. Use the best marine motor oil you can buy, of the specific gravity recommended by the motor manufacturer. Be sure that the oil pump is functioning properly, and that the filter is clean and all oil line connections tight.

Be sure that your propeller shaft revolves easily — try it with a small stillson wrench with clutch disengaged. If it turns at all hard, ease off on your shaft stuffing box gland. It is better to have a slight drip of water from the stuffing box than it is to have a tight gland, with its consequent binding and loss of power.

Now about your propeller, or wheel. Even though your motor may be in tip-top condition, you won't get efficiency if you have a wheel that is untrue in pitch. It is said that even brand new wheels are sometimes out of pitch, in one blade or another. Well, at least it is a sure thing that many wheels, after being in use for some time, become "deformed," or bent, or nicked. So send your wheel to a propeller adjuster, and get it right. It won't cost much, and you'll get real efficiency, and possibly less vibration.

Many auxiliaries have feathering wheels. In case you have one, be sure that it is well packed with waterproof grease, and feathering properly at low boat speed. Otherwise, you'll have an unnecessary drag — might as well have a solid wheel and be done with it. Incidentally, feathering wheels are apt to be out of pitch even more than solid wheels, due to wear in the working parts. Vibration and loss of efficiency will be the result unless they are trued up by a competent propeller adjuster.

If your motor is equipped with a temperature control, be certain that it is working properly. The cooling water at the outlet should be around 160 degrees for best efficiency. A cold motor isn't efficient, and a hot motor will cause pre-ignition, smoking and smelling.

Just before the race, adjust your carburetor to the leanest possible mixture which will give even performance without back-firing. Find out by means of several test runs at just what motor speed you can run the *farthest* — not the *fastest* — on a given quantity of fuel. This is the speed at which you should run your motor in an auxiliary race — for greatest mileage, not greatest power or speed. For it's the chap who gets the farthest on his allowance of fuel who stands the best chance of being in the money at the finish.

Here are a few instances which very definitely put a boat out of the running in every case:

Water pump broke down. Circulating system gave up the ghost. Valiant efforts of amateur mechanics availed nothing.

Motor had not been overhauled in several years, resulting in heavy gas consumption. Complete overhaul in following year resulted in almost double the mileage on same amount of gas — boat won a prize.

(*Continued on page 96*)

The Sloop "Escapade"

By

WALTER STEWART

For winter sailing "Escapade" is provided with a snug yawl rig containing only 300 square feet in the three working sails. This small amount of canvas pushes her along at a good round pace

WHEN *Escapade* was designed by me in 1930 the problem was not one of yacht architecture alone but of economics. She had to be squeezed down to six tons total displacement and a low price limit. This involved the following features in the design by way of compromise between the ideal and the possible: Small displacement and weight of keel; small sail area; solid instead of hollow spars (except boom); simplicity of construction; tonnage limitation (involving limited accommodations); no auxiliary power.

The use to which the yacht was to be put required that she should afford comfortable accommodation for three men and that she should be light to handle, so that two could safely sail her and one handle her once she was clear of the crowded anchorage. Her fixed draft must not exceed 3 feet 6 inches. There must be sufficient height in the navigation house (abaft the saloon) to permit a six-foot man to stand upright to steer, and to put on his clothes. The windage of the above water body, and the form in which this would be presented to the wind when the vessel was turning to windward, had to be such that, when her total sail area was reduced to 220 square feet, she could still be relied upon to force her way to windward in disturbed water and to come about (if properly handled) in any strength of wind up to force 8 of the Beaufort scale. She must be capable of high speed off the wind and have an easy motion when sailing in rough water. Her mast would occasionally be required to be lowered, which made it undesirable that its height above the pivot of the tabernacle should exceed 30 feet.

These requirements were not easy to meet, but with a total displacement of six tons, of which 4300 pounds is the weight of her outside lead, and 200 that of the small bronze centerboard and its lifting gear, she floated to her designed l.w.l. of 30 feet when in commission and ready for a week's cruise.

She twice crossed the North Sea in 1933 from the mouth of the Thames Estuary to Walcheren in Holland, and sailed up the Rhine against the strong current with a total sail spread (including spinnaker) of only 700 square feet, of which 370 was in the main lug (gunter), 90 in the single headsail, and 240 in the spinnaker, which was constantly used with great effect in making passages and against the force of the Rhine current. *Escapade* sailed into every lock she entered without assistance except on the rare occasions when there was insufficient wind to give her steerageway, when she could easily be kept moving with a 15-foot sweep. She ran 90 miles in 12 hours across two tides when crossing from Veere to the Cork Light off Harwich on September 10th, 1933, and the greater part of this distance was in a rough sea and under short sail. Her owner and his son have lived on her continuously for two years and she has proved herself an unusually cheap boat to run, being easy on her gear and having required no renewals beyond a crosstree and a certain amount of running rigging.

She has never given any trouble when sailing in rough water and has broken hardly any crockery below and, save the crosstree, no spars aloft, though her yard and spinnaker boom are both bamboos of 5-inch maximum diameter. These are inclined to whip at times in strong winds, but this is accepted as a hint to shorten sail. With a light, solid mast of British Columbia pine, she can carry her working sail long after bending stresses make reefing desirable, her 10 feet of beam (extreme) enables her to remain but slightly heeled in strong winds, and her small mass means that, even when sailing fast, her momentum when plunging in disturbed water is half that of a craft of double her displacement sailing at the same speed. (Many yachts of her over all dimensions displace 12 tons.) The resulting reduction in the thousand and one stresses on the fabric has enabled it to retain its shape and tightness in spite of fairly light scantlings. High class material was used in *Escapade's* construction, her planking being only ⅞-inch finished but well-seasoned Honduras mahogany. She has only four sawn oak frames, but her bent timbers are spaced 6-inch centers and her fastenings are more numerous

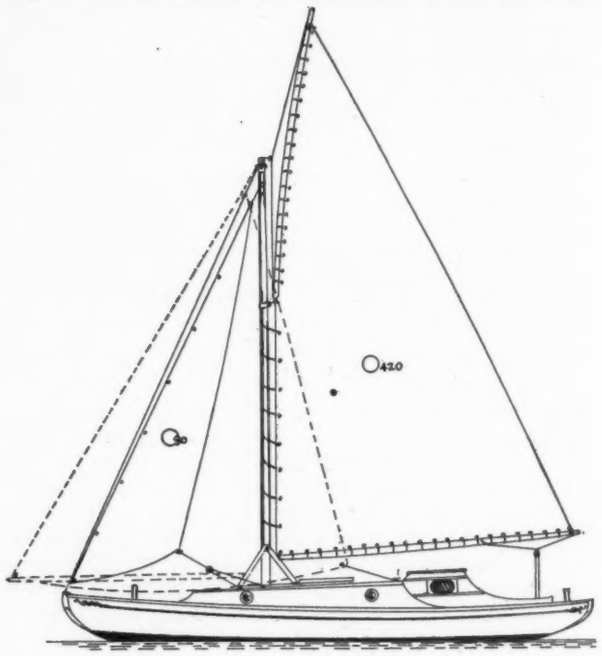
than is the rule in craft of her size, while two heavy stringers on each side and four strong diagonally planked bulkheads, tied to the beams and sawn timbers by galvanized steel plates at the angles, help to stiffen the structure.

Experience has shown that when moving fast the *Escapade* holds a good wind and makes remarkably little leeway even when sailing with the board completely up; it is in light winds that the great improvement in her performance to windward with the board down is most apparent. In smooth water the board is a useful pilot, but the owner is economical in using it for this purpose. The truth is that the business of constructing strong and tight centerboard trunks is not as well understood in England as it is in America, and *Escapade* made both her North Sea crossings without the board. As a result of this perhaps excessive caution, *Escapade*, after two seasons of constant sailing, now hardly ever requires to be pumped. She is in fact "an old man's darling" and responds to kind and considerate treatment. Her really remarkable speed, full and by or off the wind, has given rise to the legend that she is fitted with a secret motor, but the true explanation is her light displacement and the beautiful form of her afterbody. Her above water aspect is a shock to the orthodox, but this is what gives her such quite unusual room below without detrimental windage forward.

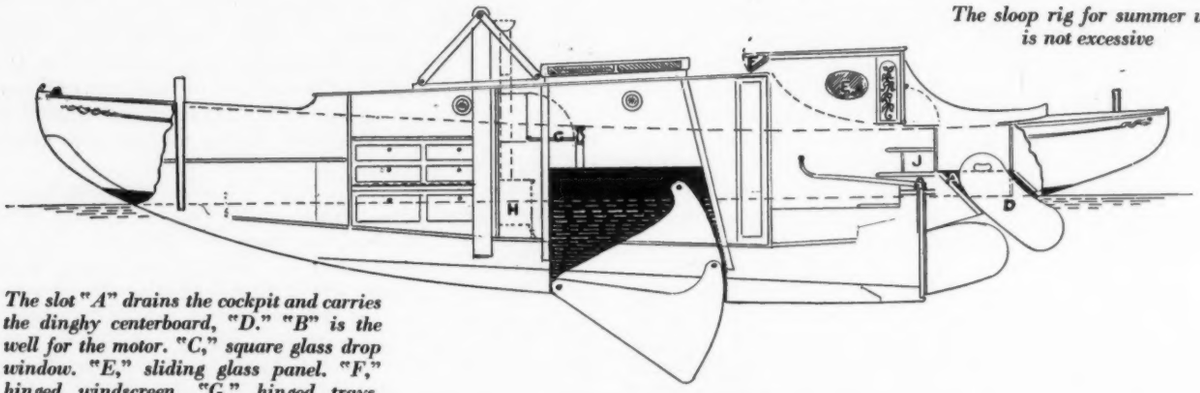
For winter sailing *Escapade* has been provided with a snug yawl rig of a total area of working sail of only 300 square feet. That a hull 37 feet long, 10 feet wide, and with a fixed draft of 3 feet 6 inches, can be driven at a speed of 9 miles an hour with this small sail spread is a good indication of the easy form of her model, and she sailed the measured sea mile in Sea Reach at slack water in six and one-half minutes with one reef in her small (300 feet) lug and a single headsail of 90 square feet area.

Space does not permit a detailed description of the layout below, which consists of a small forecastle with one pipe cot, a galley with a berth for the cook, a saloon 9 feet 9 inches square, and a navigation house 4 feet 6 inches long with headroom of 6 feet 2 inches under the beams.

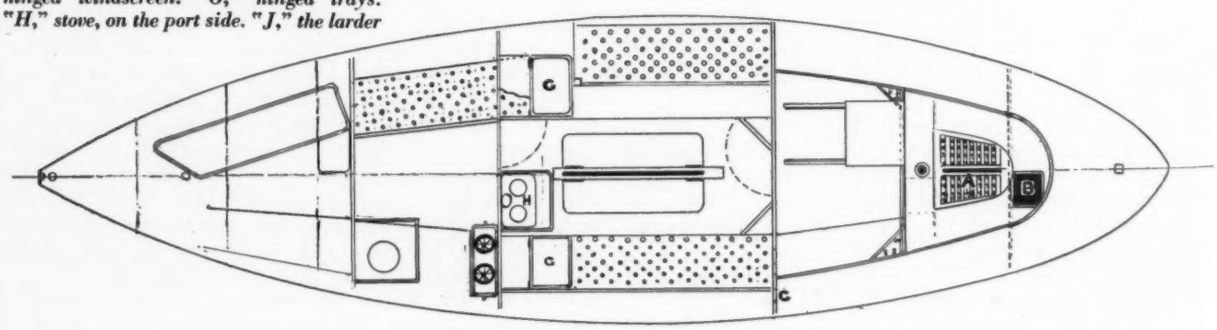
Escapade is fitted with a raised deck amidships (an idea for which her owner tenders his respectful acknowledgments to Mr. Howard) but, unlike *Alice's* raised deck, the forward part is considerably lower than the after end and the after bulkhead of the saloon has a door which opens into a sunken deckhouse, the roof of which is only eight inches above the level of the main raised deck. This deckhouse is not extended across the full breadth of the vessel at this point and is fitted at its forward end with two narrow wind screens. The side sliding windows are oval and of ample area. This plan has proved a success, affording comfort to the helmsman.



The sloop rig for summer use is not excessive



The slot "A" drains the cockpit and carries the dinghy centerboard, "D." "B" is the well for the motor. "C," square glass drop window. "E," sliding glass panel. "F," hinged windscreen. "G," hinged trays. "H," stove, on the port side. "J," the larder



In Praise of The "Raging Canawl"

By

CHARLES H. HALL

At Lockport two deep locks lowered us more than fifty feet, and the crews got their first lessons in tending lines

Waiting for the green light to summon us into the lock at Little Falls, the deepest and most impressive on the canal

The fleet motors out of a lock and resumes the cruising formation of "line ahead"

SALT water yachtsmen are apt to turn up their noses at any body of fresh water and to refer to trips through the inland waterways of the country as "Ditch Crawling." They paint for themselves appalling pictures of struggling with lock tenders, arguing with rude men on towboats and barges, and running grave risk of damage to boats. Having just completed a voyage through the New York State Barge Canal without an untoward incident and with a great deal of pleasure, I feel that this traditional attitude is foolish. The state employees were both helpful and courteous, while the men on tugs and barges, with a single exception — and he, perhaps, had some excuse for annoyance when we beat him into the lock limits — greeted us cheerfully at all times. And the scenery along the canal was attractive and at times beautiful. There are 340 miles to be covered and 35 locks to be negotiated between the federal lock at Troy and the North Tonawanda terminal, and almost every foot of the way is interesting.

Fifteen motor boats left North Tonawanda on the morning of Sunday, May 27th. There were Cruisabouts, Giants, Little Giants, built by the Richardson Boat Company and all driven by Gray engines, while the flagship was the day cruiser *Daphne*, powered with a 125 h.p. Kermath. The fleet was under the orders of James E. Gillespie, who commanded the *Daphne* and led the way. He interviewed the lock tenders, made all arrangements for fuel and water, and did the worrying for the crowd. Shortly after noon each day a representative of the oil company would meet him at some lock, find out where we planned to tie up for the night and how much "gas" we would need. On arrival at the scheduled terminus, there would be the tank truck all ready for gassing up. The local grocers, butchers and bakers swarmed to the waterfront with their wares, which simplified the matter of housekeeping.

We had our first delay at Lockport, being held up while a long string of barges were passed through the two locks, but from there to Rochester good time was made and the terminal

reached about dusk. That evening we were the guests of a local brewery and sat down to a bountiful "Dutch Lunch" and rivers of excellent beer at exactly the correct temperature.

In the morning, the first thing was to refuel the fleet and refill the water tanks, which was done quickly, and we were off on the next leg. Rochester terminal is off the main line of the canal and the channel leads through the heart of one of the city's handsome parks and past the university buildings. Back to the main channel, we swung off once more to the eastward for a run of nearly 70 miles, with nine locks to go through. That day our luck with locks was still poor, and we had several waits while commercial craft locked up or down ahead of us.

We passed Palmyra, where Joseph Smith had his interview with the angel and wrote the Book of Mormon, and so on to Weedsport, the end of the day's run. Nine locks furnished considerable exercise and plenty of line tending, to say nothing of careful handling going in and out, but even the rawest tyro was soon catching on and doing his job without fuss.

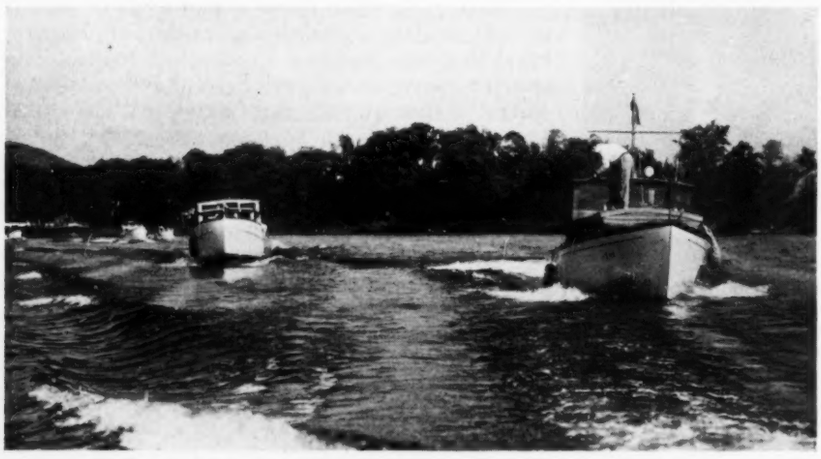
The third day's run took us past Three Rivers, where the canal to Oswego branches off, and on into the wide waters of Oneida Lake. A line of buoys led us across the lake, past tiny rocky islands and miniature lighthouses, to Sylvan Beach, where the entrance to the canal is protected by a stone breakwater. Two more locks lifted us to the level that led to Rome, that day's mooring place. While the canal had, in its western reaches, followed the course of the original Erie, it had now branched off on its own and, mainly through canalized river and some cross country cutting, wound its way around the spurs of the hills. In one reach, we would be steering S by E, a few minutes later and a mile or two further on, the course would be around to NNW. The hills rose higher as we went on and the little towns no longer huddled close to the waterway, their old fashioned houses facing it, but were hidden from us. It was peaceful cruising, with barn swallows flitting ahead of us and kingfishers watching our progress, and an occasional scornful pheasant viewing us from the bank. Twice there was a clamor as a kingbird chased a cowardly crow that had invaded his privacy. Then there were green pastures where herds of cattle grazed busily, scarcely raising their heads to watch until our swell slapped at the banks. Now and then we would meet a tanker, chugging along stolidly, or overtake a string of barges pulled by a puffing tug.

Another early morning start and we were headed east once more with at least eight locks ahead. It was no easy task identifying the buoys against the rising sun, as red and white are both the same shape and both look black when silhouetted against the light. We nearly missed the channel once, having decided that a red buoy was white, but we corrected our mistake in time. We plugged along past historic Oriskany, Utica, and Herkimer to Little Falls, where the canal is blasted out of the solid rock and where the deepest lock in the system lowered us more than 40 feet. We had a wait there, too, but by now our luck was improving and every now and then we found the green "Go" signal welcoming us as we approached a lock. That night we tied up at Fonda, before sunset, and filled the gas tanks.

Thursday morning we shoved off to a strenuous day. By night we had put behind us 113 miles of canal and river and twelve locks, including the splendid quartette at Waterford with a total lift of 136 feet. Then into the Hudson at last and so on down to the federal lock at Troy. Through that, and in tidal waters, we made for the hospitable Albany Yacht Club and filled up with water. Then on down river for Kingston, which was reached after dark. The entrance to Rondout Creek was a bit confusing at first, as the light on the end of the southern breakwater had just been changed from white to green, but the ferryboat went in ahead of us and we slipped up the creek and tied up for the last night of the cruise.

No more locks between us and New York. No more worrying about

(*Continued on page 93*)



Running along a quiet reach of canalized river, just after overtaking and passing a freighter

A tanker like this commands respect — and takes up a good deal of the channel. This one is the largest vessel using the canal and must be a "driving fit" in the locks

Under the Lee of the Longboat

by Cap Stan

THE early trials of the Class J boats have told us just about nothing at all relative to the speed possibilities of *Rainbow*, *Yankee* and *Vanitie*, and *Weetamoe* hasn't even had a tryout at this writing. In some very informal tilts, *Vanitie* went out and gave *Rainbow* quite a trimming. Then *Rainbow* turned the tables. Next, *Yankee* appeared, and took the measure of both *Rainbow* and *Vanitie*. Then *Rainbow* beat *Vanitie*, and both of them handed *Yankee* a lacing in weather decidedly suited to the latter. It probably means that none of these craft are in anything like real racing trim, are trying out different sails, experimenting with trimming ballast, and so on. So don't get excited. One critic has all kinds of faith in the new *Rainbow*. Another believes that *Yankee*, with her new bow, will turn the trick. And *Weetamoe*, with her new keel, may have a lot to say before the defender of the America's Cup is finally picked. Wait a month or six weeks before placing any bets.

+ + +

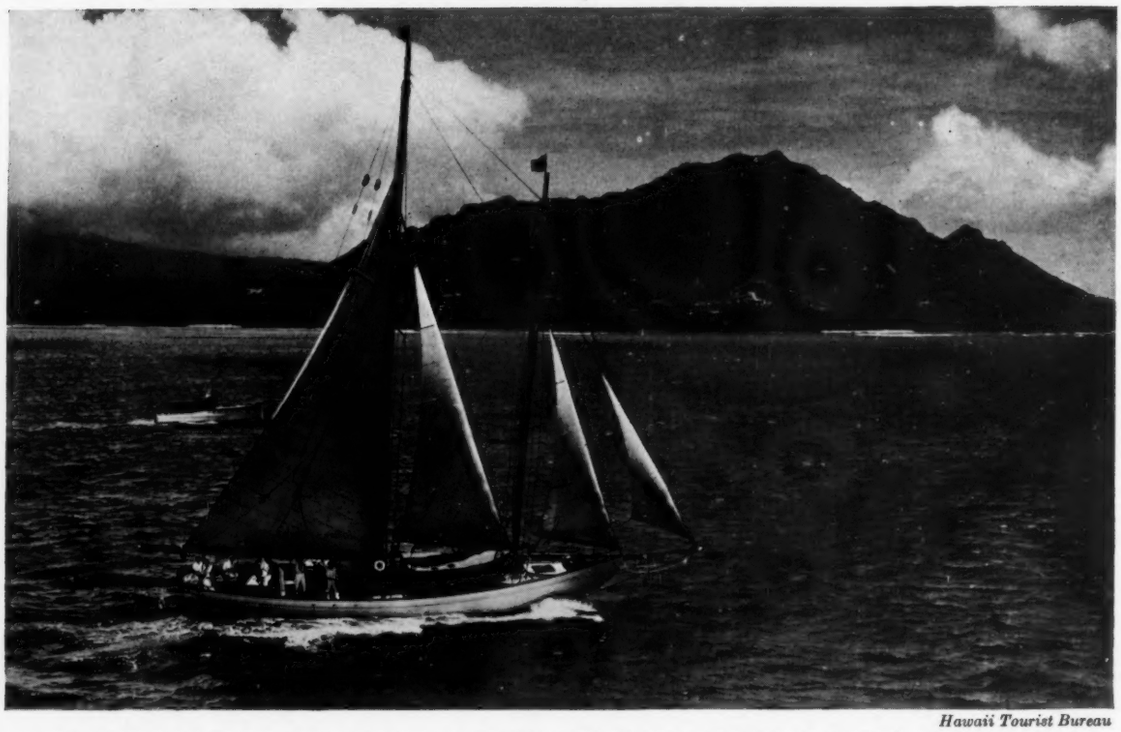
Just as I expected, the Bermuda Race this year won't come up to the 1930 fleet in number of entries, but will be long on quality. Quite a few of the also-rans have dropped out of the competition, convinced at last that there just isn't any use. This leaves a really formidable fleet of some 30 boats to face the starter, and it's an unusually tough job to try and weed out the contenders from the flock. The ratings of many boats have changed under the new measurement rule, which is another factor to upset the beans, especially as ratings on all craft are not available at this moment. However, as it is customary to make predictions on ocean races on this page just before the start, here we go: The big fellows, *High Tide*, *Skylark*, *Vamarie* and *Mistress* should lead the way to Bermuda, but will probably be beaten on time allowance by *Mandoo*, *Grenadier*, *Teragram*, *Rugosa* and *Water Gipsy*. *Dorade*, with a high rating, looks like a beaten boat, and *Stormy Weather* has not shown enough to warrant picking her over the veterans. The same goes for *Edlu* and *Nam Sang*. So much for Class A. In Class B, the battle should be between *Malay* and *Baccarat*, with *Jubilee* and *Cyclone* as the long shots. *High Tide* stands a chance of winning the whole business if light weather prevails, but will fall by the wayside in hard going. *Mandoo* is a good bet in all-round conditions, but will have to beat *Grenadier* and *Teragram*. There you are, Mates. Kind of a mixed-up prophecy, but the best I can do under the conditions. Now pick up your daily paper and see who really won — the race will be over by the time this reaches you.

+ + +

Just because a dinghy doesn't set the world on fire the first time she is under sail doesn't prove that she is a total loss. This has been proven more than once, one of the latest and most startling cases being that of Frank Campbell's Class B dink *Fancy Pants*. *Fancy Pants* is a fancy craft — smooth skin, highly polished, and so on — but she didn't go worth a whoop. Numerous other dinks whaled the tar out of her, race after race. Then something happened. Without warning, *Fancy Pants* began cleaning up. She went to Boston and walloped the fleet. She did the same thing at Mason's Island, and then repeated the dose at Essex, to say nothing of numerous races at Larchmont. What's the answer? Well, according to her skipper, he merely replaced a metal centerboard with a wooden board of somewhat different shape, and immediately began to sail circles around his former conquerors. As a rule has been adopted recently barring any new smooth-skinned creations in Class B, it looks as though *Fancy Pants* would have things her own way for some time to come — unless some genius discovers something to give some existing dink a new lease on life, or evolves a new hull form which will upset present ideas.

+ + +

On every side the discerning observer will see signs that yachting is in for a very good year. An encouraging number of new craft were built last winter and spring, and the naval architects report that there are more in the offing. The yacht yards have been extremely busy all spring overhauling and commissioning all sizes and types of boats which were not in the water last year, and the racing fleet shows every indication of surpassing the turnout seen the past two or three seasons, with all the old and many new events scheduled. Stand by for a big season.



Hawaii Tourist Bureau

Harold Dillingham's 61-foot schooner "Manuiwa" (ex-"Highlander") leaving Honolulu for San Pedro. Her time, just over 15 days, set a new record for the passage. She will be a contestant in the race to Honolulu

Racing News of the Month

Bermuda Race Entries

THE entry list of the 1934 Bermuda Race closed with thirty-two yachts scheduled to make the 650-mile passage to the island of the lily and the onion. These are:

CLASS A

Countess	Schooner	Jack R. Aron	New York
Dauntless	Schooner	Geo. A. Whiting	Baltimore
Dorade	Yawl	Olin & Roderick Stephens, Jr.	New York
Edlu	Cutter	R. J. Schaefer	New York
Falcon II	Schooner	Gilbert Ottley	New York
Flying Cloud	Cutter	Pierrepont E. Johnson	Northeast Harbor, Me.
Grenadier	Schooner	Morss Brothers	Boston
Hamrah	Ketch	Robert R. Ames	Boston
High Tide	Schooner	E. E. duPont	Wilmington, Del.
Mandoo	Schooner	D. Spencer Berger	New York
Mistress	Schooner	Geo. E. Roosevelt	New York
Nam Sang	Ketch	Joseph J. Plumb	Marion, Mass.
Rugosa II	Yawl	Russell Grinnell	Providence, R. I.
Savannah	Schooner	Frederick C. Rogers	New York
Shimmo	Schooner	Henry K. Hill, *et al*	Toronto
Skylark	Schooner	William S. Gould	New York
Stormy Weather	Yawl	P. LeBoutillier	New York
Teal	Schooner	R. Graham Biglow	Norfolk, Conn.
Teragram	Schooner	Geo. W. Mixter	New York
Vamarie	Ketch	Vadim S. Makaroff	Oyster Bay
Volante	Schooner	Alfred L. Loomis	Tuxedo Park
Water Gipsy	Schooner	William McMillan	Baltimore
Zingara	Schooner	Robert P. Baruch	New York

CLASS B

Baccarat	Cutter	Russell Alger, Jr.	Detroit
Cyclone	Cutter	Frederic Jay Wells	Chester, N. S.
Dainty	Yawl	Alfred A. Darrell	Bermuda
Duckling	Sloop	C. W. Atwater	New York
Jubilee	Cutter	Gilbert Dunham	New York
La Mouette	Cutter	dePeyster and Briggs	New York
Malay	Schooner	Raymond W. Ferris	Akron, Ohio
Windrush	Cutter	Jonathan S. Wilford	Philadelphia

CLASS C

Astarte	Ketch	Lawrence L. Reeve	Northeast Harbor, Me.

The *Royal Colonist & Gazette* announces a sweepstakes on the outcome of the race for the benefit of the Hamilton Sailors' Home. Tickets are selling at one shilling and £90 will be distributed in prizes. Too bad the crews of the fleet cannot participate.

\+ + +

San Diego Lipton Trophy Won by "Gallant"

WHO would expect a Six-Metre to win from an "R"? Yet that is what has happened twice on the Pacific Coast in the racing for the famous San Diego Lipton Trophy. A new deed of gift was formulated a year ago for this most cherished of all Southern California cups, under the terms of which a challenging club may select one of its boats rating within ten per cent of some boat of the same rig in the defending club. Other Southern California clubs may then be represented by yachts of the same rig whose ratings are within five per cent of the mean rating of the defender and first challenger. A single race is then sailed on a boat for boat basis.

The competition for this trophy had previously been between cabin sloops racing on time allowance, but interest had been waning for some time. The two races under the new deed of gift so far have been confined to "R's" and "Sixes" whose Universal Rule ratings are nearly the same.

At San Diego, last Armistice Day, the defending "R" boat *Friendship* was pitted against three "Sixes," another "R" and a Pacific One-Design. *Friendship* had the heels of the fleet, but dropped to second place when she hit a soft spot. In trying to regain her lead later she got into a luffing match with the Six-Metre *Gallant*, which carried them both so far off the course as to throw the race to Tommy Lee's "Six" *Caprice*, which had been lagging some five minutes astern.

On May 30th this year, four "Sixes" and three "R's" came to the starting line off San Pedro in a moderate westerly. The race was won by Ben Weston, sailing the "R" boat *Debra*, after nearly six years' absence from competition. Then a flock of protests developed, chief among them being the fact that the outer mark sank without a trace, entailing a grand mix-up. So the committee ordered the race to be resailed on June 3rd.

This time the first leg was to the westward in a light southerly, a reaching start. The Six-Metres *Gallant* and *Mystery* were over too soon and had to go back. Paradoxically, this is probably the reason they won. *Debra* also went back, although she was not recalled. With the rest of the fleet closely bunched behind him and fighting one another, Ted Geary took *Pirate* out into a 30-second lead at the first mark, and started the beat on the starboard tack to the eastward. The others followed him, but *Gallant* and *Mystery*, smelling a shift of wind to the westward, stood on beyond the mark before going about. The shift came, putting the others to leeward and giving *Gallant* a lead of nearly two minutes at the outer mark.

Debra gained on the run, but on the long beat of the second round Ted Conant, at *Gallant's* stick, kept *Debra* covered. Ashley Bown, sailing *Friendship*, went from fifth to second place, only 55 seconds behind the leader. On the following reach and run he failed to gain, while *Debra*, running fast, was once more second at the leeward mark, with less than a mile of windward work to the finish. *Gallant* again kept *Debra* safely covered, but again *Friendship* came up rapidly to pass *Debra* near the finish line and to lose to *Gallant* by only 15 seconds.

And so the score stands two to nothing in favor of the "Sixes" over the "R's." Yet we still shake our heads and maintain that the "R's" are faster. It is noticeable that in both contests it was Ted Conant who upset the dope. Perhaps we ought to revise our judgment and say that the "R's" would be faster if sailed by Six-Metre skippers.

H. B. Warren

M. Rosenfeld

Dr. E. P. Hussey's 35-foot ketch "Falcon" makes a stop in Bermuda on her return passage from the West Indies

"Falcon" Completes West Indies Cruise

ON MAY 8th the auxiliary ketch *Falcon*, owned and commanded by Dr. E. P. Hussey, 87-year-old Buffalo physician, reached New York at the end of a cruise which began October 10th, 1933, when she left her home port bound for New York through the canal. She coasted to Jacksonville, part of the way outside, and then shoved off for San Juan, Porto Rico. Thence she sailed through the Windward and Leeward Islands, visiting sixteen and going as far south as Martinique. Returning via the Virgins and Porto Rico, she reached Bermuda in April. The *Falcon's* best day's run was 168 miles.

The boat, which was designed by S. S. Crocker and built at Erie, Pa., is 35 feet over all, 28 feet 7 inches water line, 10 feet 10 inches beam and 4 feet draft. Her plans appeared in the October, 1933, issue of Yachting.

Daniel Bacon

FEW yachtsmen have been held in deeper affection by their shipmates or those to whom they were really known than Daniel Bacon, who died suddenly in May at Montevideo, on board the Cunarder *Franconia* while on a world cruise on that vessel. Though seventy-one years of age, he kept his interest in yachting and raced and cruised actively on his yachts, the Class S sloop *Senta* and the auxiliary cruiser *Querida*.

Coming from a seafaring and ship-owning family, Daniel Bacon took to the sea naturally and while a young man made a long voyage on a sailing ship, later entering the shipping business where he became prominent. At the time of his death he was chairman of the board of the West India Steamship Company. Equally prominent in yachting affairs, Mr. Bacon owned and sailed at various times in his life many different kinds of yachts, from a Cape Cod catboat to the racing sloop *Avenger*, in which he won the Astor Cup in 1911.

Active in the formation of the Royal Nassau Sailing Club, near which he had a winter home, Daniel Bacon was Commodore of that organization in 1925, and in 1930 served in the same capacity in the Cruising Club of America. He was also interested in the Sea Scout movement and was a member of the executive council of that body.

Fond of cruising, his yacht *Querida* was seen in many of the New England ports each summer, with the Commodore and his wife, formerly Miss Margaret White of Belfast, Maine, aboard. The Commodore, with his friendly smile and his cheerful greeting, will be missed this summer wherever the cruising yachtsmen gather.

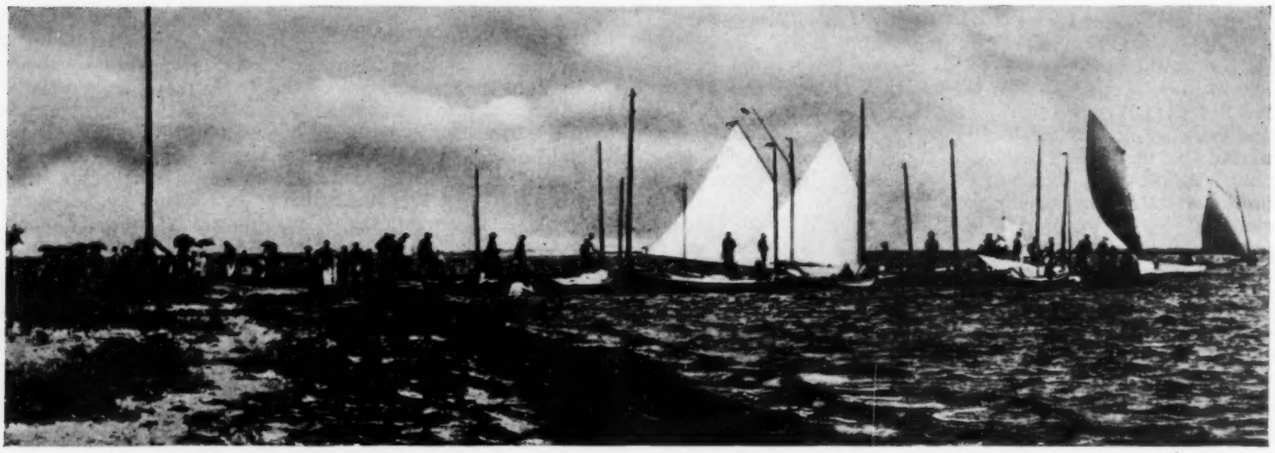
\+ + +

Races For the Canada's Cup

THE ninth series of races for the Canada's Cup will be sailed off Rochester, N. Y., beginning August 20th, in Eight-Metre boats. The cup, which has been in competition since 1896, is the most important trophy sailed for on the Great Lakes and is second in interest only to the America's Cup. The challenger, *Invader II*, has already been named by the Royal Canadian Yacht Club of Toronto. She was designed by Fife and built in Scotland in 1932. In that year she was defeated by *Conewago*, three races to one. She was, Canadians believe, not fully tuned up and, immediately following the races, was turned

Meade Minnigerode

Twenty-nine dinghies participated in the series held by the Essex Yacht Club in May. Class A off to a start



Yachting on Shinnecock Bay 45 years ago. An old print showing the first race of the Shinnecock Yacht Club, July 4th, 1888

over to Thomas K. Wade, a seasoned skipper. He has kept her out of all but secluded, home course racing ever since and has worked tirelessly at tuning her up. Changes, rumored to be radical, have been made both above and below water so that today she is more of a mystery than if she were fresh from her builder's yard.

The defending yacht will be chosen from one of Rochester's three "Eights." *Conewago*, the successful defender in 1932, is the likely bet. She was designed by Olin Stephens. Wilmot V. Castle, of Rochester, skipper in the 1932 series, owns and sails her. She will have to win a lengthy series of trials against *Thisbe*, a Crane "Eight," sailed by T. Albert Sharp, and *Cayuga*, a Paine boat also built for the 1932 series, sailed by John Van Voorhis. Neither of these boats has sailed — or, possibly, "been sailed" is the way to put it — to approach the Stephens boat and, at this writing, *Conewago's* ultimate victory seems, possibly, too readily assured. The trials, twelve of them on week-ends and the rest concentrated into a week of solid racing, will be sailed out to the end, however, and unexpected results are possible.

If *Conewago* is chosen, the same boats that sailed in 1932 will meet again; the defender identical in every particular of rig, skipper and crew; the challenger, if rumor is correct, with changed hull and rig and new personnel. In the 1932 series the Canadian was superior in the heavier going and the American invincible in light or moderate air with little sea. She has been unbeatable in those conditions against everything she has met. Many who have studied her, and who know their Eight-Metre boats, believe that she is the fastest "Eight" in the country.

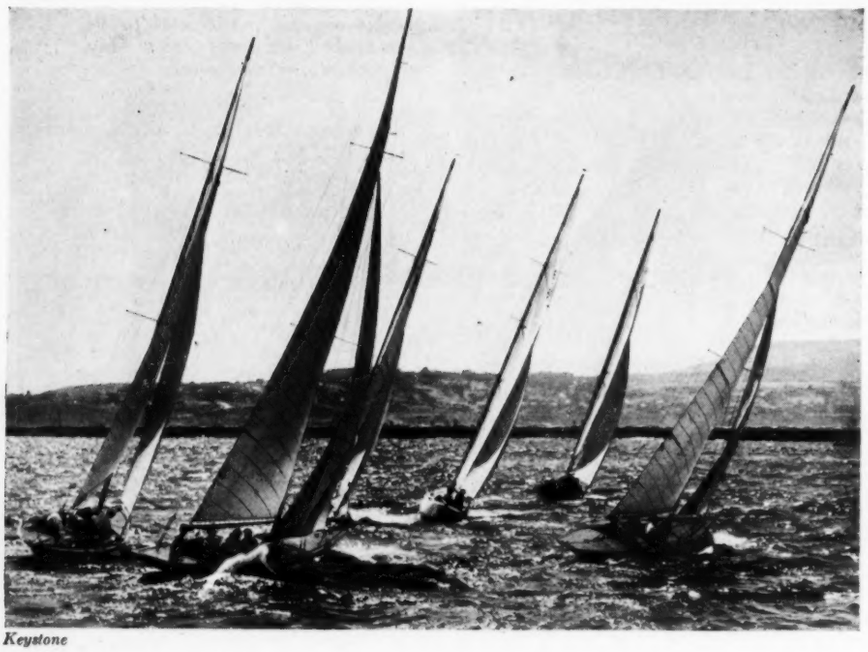
Rochester will include the series in its year-long Centennial Celebration, but the event needs no special booking to be tremendously popular, so keen is the port for sailing. The last series turned out a big spectator fleet, a running broadcast was given over WHAM, the press used its biggest head type and, on the last two days, throngs estimated at 10,000 crowded beaches and pierheads.

C. A. RAWLINGS

\+ + +

"Jeff" Davis Honored

AT A special meeting of the Edgewood Yacht Club, held at the clubhouse, in Edgewood, R. I., May 8th, Arthur W. ("Jeff") Davis was elected to honorary membership. "Jeff" is yachting editor of the *Providence Journal and Evening Bulletin*, editor of *Starlights*, the official organ of the International Star Class Racing Association, an official of the North American Yacht Racing Union and also of the North American Dinghy Association. He has reported on yacht racing affairs for the *Journal and Bulletin* for the past thirteen years, and no racing event in these waters is complete without his genial presence. The Essex Yacht Club, of Essex, Conn. has also recently made him an honorary member.



Keystone

Six-Metres and 20-Raters racing for the Lipton Trophy off San Pedro in the race held on May 30th which had to be resailed because of the sinking of one of the outer marks. The Six-Metre "Gallant" took the series

This 24-footer, driven by an 85 h. p. Chrysler engine, steps along close to 28 miles an hour

An Active Season Begins

WITH three of Chicago's leading yacht clubs scheduling the greatest number of races in their history, and the Mackinac and Michigan City races promising an unusually large entry list, Lake Michigan's season is away to a good start.

The Sheridan Shore Yacht Club, which now has the largest fleet of Stars (19) on the Great Lakes, started its 48-race season on May 26th. During the week beginning July 7th representative Stars from all over the Great Lakes will gather there.

When the first race got under way at the Chicago Yacht Club on Memorial Day, it was apparent that Chicago now can boast of the largest Class R fleet in the world. A number of 20-Raters have come to Lake Michigan from Long Island Sound recently and the Chicago Yacht Club "R" group numbers eight. Fred Wacker's *Gypsy* won the May 30th opening race.

Vice-Commodore Malcolm Vail advises that the 1934 Mackinac Race promises well this year, and George Catto, veteran Chicago Yacht Club race committee chairman, announces 44 races by this club during the season.

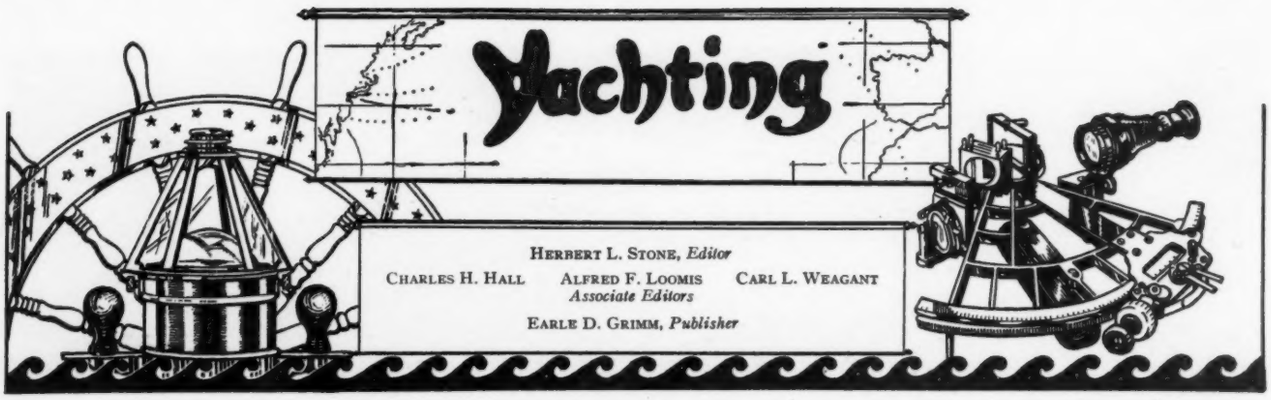
The 42nd annual Michigan City Race, a Columbia Yacht Club event, is expected to break all entry records. Commodore Rubinkam announces a 25 per cent increase in the club's membership in the past six months. Columbia's season calls for thirty

(*Continued on page 98*)

Commodore R. J. Schaefer's "Edlu," a new 56-footer which will sail in the Bermuda Race

Right, top. "Onward III," a new Alden schooner, takes the water. She is 60 feet over all, and is owned by Phillips N. Case

The 32-foot auxiliary cutter "Crusoe," designed for J. Thornton Mills by Charles D. Mower


Yachting
HERBERT L. STONE, Editor
CHARLES H. HALL ALFRED F. LOOMIS CARL L. WEAGANT
Associate Editors
EARLE D. GRIMM, Publisher

EDITORIAL

Changes in "Yachting's" Afterguard

IT IS always difficult to say goodby to old friends and shipmates, and it is with extreme regret that we announce the resignation as Associate Editor of Samuel Wetherill, for over ten years one of the editorial staff of this magazine. A good sailor, an excellent judge of boats, and a forceful writer, Mr. Wetherill made many friends both ashore and afloat. For the past year he has suffered from ill health, which hampered his activity afloat, but from which he has now largely recovered. He leaves to take up other work in a field in which he is particularly interested.

Signed on in his berth is Alfred F. Loomis, whose writing is already well known to YACHTING's readers and whom in spirit we have considered one of our afterguard for some time. We are all lucky to have him now hauling on the ropes regularly. He will pen Under the Lee of the Longboat, beginning with the August issue, and, as "Alf" states his opinion freely and loves an argument, there will be no let down in the interest of this column. Whether his desk will see much of him, we do not know, for "Alf" is also one who likes to get afloat. He is sailing a yacht in the Bermuda Race, and our past experience leads us to believe he will write a good account of this event, as well as of any cruise or expedition on which he may embark. We feel we are to be congratulated in this accession to our afterguard.

\+ + +

Tax on Boats Terminated

BOAT owners will be glad to learn that the tax on the use of yachts and pleasure boats which has been in force for the last two years has been abrogated, and will not apply after June 30th of this year. The Revenue Act of 1934 states, in Title IV, Section 613:

> "Termination of Tax on Use of Boats:
> "Section 761 of the Revenue Act of 1932, as amended, shall not apply to the use of any boat after June 30, 1934."

This tax, which was imposed July 1, 1932, and varied with the size of the yacht, turned out to be of little value as a revenue producer and fell in the category of a nuisance tax. That it has now been removed is a source of satisfaction. The tax, however, remained in force up to June 30th, so that any owner with a new yacht launched this year and used before that date is subject to a *pro rata* tax up to that date.

\+ + +

Inland Yachting

SOME subscriber out in Calgary, Alberta, sends us a clipping from the local newspaper telling about the rapid growth of yachting and racing in the very center of the prairie country, some 3000 feet above sea level. At first glance the significance of the article did not strike us. Just another local club hoping for publicity, we thought. But no, this was different. Here was a yacht club thousands of miles from the sea or the Great Lakes, near the apex of the continental divide, that was purchasing a new clubhouse, was holding intersectional racing with another yacht club in Alberta for a challenge cup, that boasted a large fleet, and the commodore of which was Sergeant Michael Sullivan, we surmise of the Northwest Mounted Police. The club was in the process of applying for a beer license, which also seemed fitting and proper for a yacht club.

A fleet of twelve sail boats, many speed boats, outboards, and other craft, used on an artificial irrigation lake three and one-half miles long, shows more forcefully than these written words the hold which the sport has on the general public in North America. Wherever there is water to float a shallop there will be found boats and men to build them, the former necessarily adapted to the conditions they have to meet. From Missouri, from Kansas, from Colorado, from Idaho, come letters that tell the same story. The urge to get afloat, inherited from a race of seafaring forebears, drives men to make the best of the conditions they have, inadequate as these may be.

Those of us lucky enough to live near some large body of water are too prone to think that sailing and the love of the sea are confined to those equally favored. If they want to know what the real urge is, we invite them to look at what their inland brothers succeed in doing, and doing well.

IN THE WORLD OF YACHTING

M. Rosenfeld

J. SEWARD JOHNSON

BY REASON of his excellent work in his Six-Metre yacht "Jill" during 1932 and 1933, J. Seward Johnson has become well known in that class, both in this country and abroad. Having owned and sailed no less than four "Sixes" in the last five years, his activity has been confined largely to that fine hard-racing international class. In the Stephens-designed "Jill," he was a member of the American team which won the British-American Cup in 1932 in British waters, where he made the second highest point score, "Bob-Kat" alone beating him. Later that same season his boat was chosen to race for the Seawanhaka Cup, then held by the Royal Northern Yacht Club on the Clyde. "Jill" was successful in this venture, bringing the time-honored trophy back to the club which first placed it in competition and which, since then, has seen but little of it. Last year, sailing "Jill" in Bermudian waters, he won the Prince of Wales Trophy against two Bermuda "Sixes."

Going first into the Six-Metre Class about 1930 with the "Clytie," one of the older Crane-designed boats, he next owned the "Aphrodite," and in 1931 he had "Jill" built for him. This year he ordered a new "Six," the "Jack," which was shipped to Bermuda in April just after she was launched. With but little time to get the boat shaken down or in racing trim, she did not show much against the Bermuda "Sixes" in the racing during May for the Prince of Wales Cup. The new boat, however, is now being raced here for a place on the American team which will meet the Scotch invasion in September.

Seward Johnson's experience has not been confined to short course racing. In 1923, with his brother Robert W. Johnson, he sailed the schooner "Ariel" in the Bermuda Race, and five years later they entered a larger schooner, the "Zodiac," in the Transatlantic Race for the King of Spain's Cup, which was won by the "Elena." In the "Zodiac" Mr. Johnson and his brother have done much extended cruising.

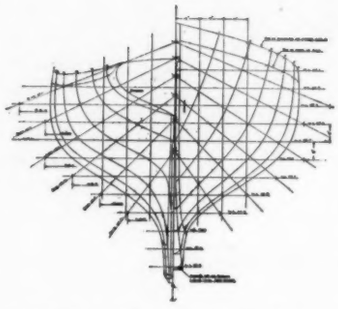
His club affiliations are with the New York, Seawanhaka, and Larchmont Yacht Clubs in this country, and the Royal Bermuda Yacht Club, Hamilton.

A Cruising Cutter with a Promise of Speed

FRANCIS SWEISGUTH, of Henry J. Gielow, Inc., designer of the fast cruising yawl *Gleam* and the more recent schooner *Savannah*, turned out the accompanying plans of a cruising cutter for a New York yachtsman. The yacht is now under construction at the yard of the New York Yacht, Launch and Engine Co., New York, and is scheduled for a midsummer launching. She is 38′ 6″ over all, 30′ 10″ l.w.l., 10′ 5″ beam and 5′ 11″ draft. Her sail area is 800 square feet in the three lowers. Her lead keel is 8250 pounds in weight. With this ballast and a hollow box mast, she should carry this amount of canvas even in fresh breezes and her easy lines should give her a good turn of speed. Roller reefing gear, the pattern devised by the Minneford Yacht Yard, is used on the mainsail. With furling gear on the jib, short bowsprit and short main boom, she should be readily handled by a small crew.

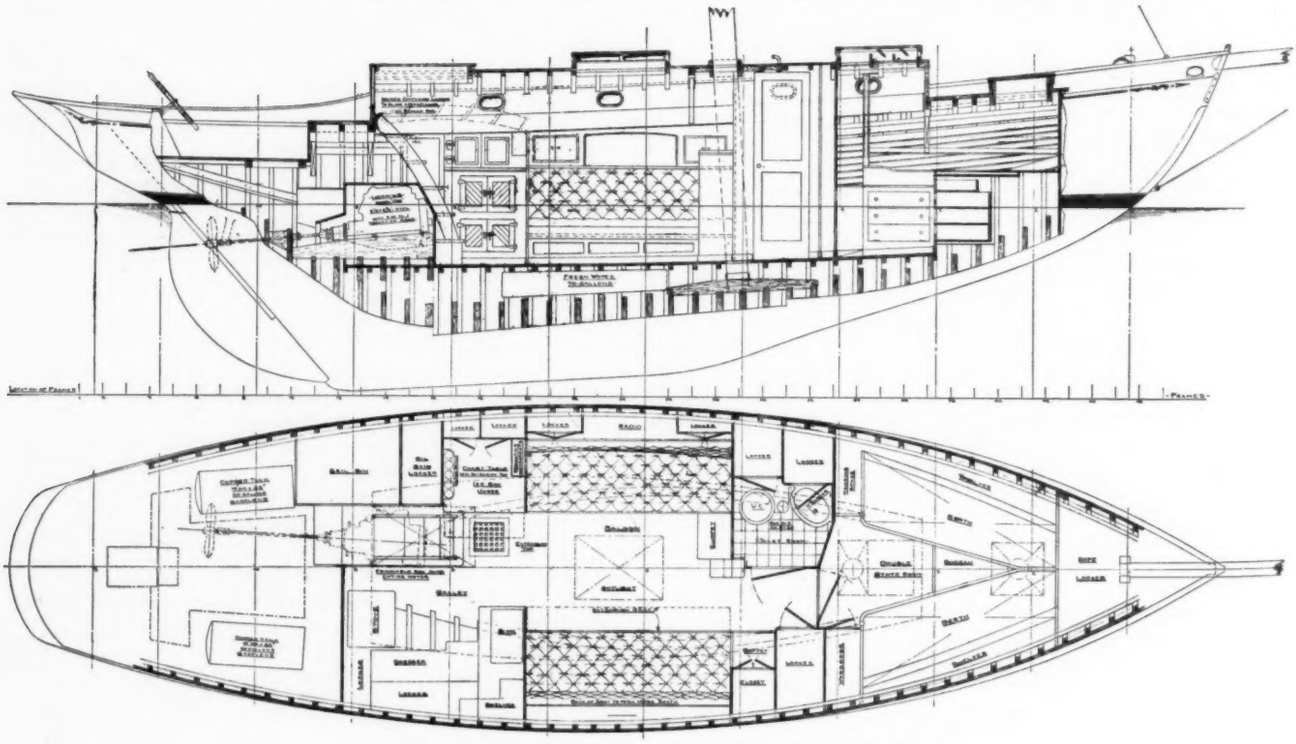
The hull is planked with Philippine mahogany, fastened with Everdur screws; the decks are of teak; house, skylight, hatches and joinerwork are of Mexican mahogany. Deck hardware is of bronze. The engine, a model UAD 40 h.p. Lycoming with reduction gear, turns a 22″ by 14″ Hyde feathering wheel. Her designed speed under power is 8 miles plus. Gasoline capacity is 60 gallons and 70 gallons of water is carried, all in copper tanks.

The arrangement plan shows a double stateroom forward, a main cabin sleeping three, well-equipped galley, and ample stowage space. Ventilation below in wet weather is assured by the use of C. L. Moody's clever hatch which admits air but not water. The top of the ice box is used as a chart table. The oilskin locker, with the grating in the floor at the foot of the companion ladder, takes care of wet clothing. Light sails, hatch and sail covers, awning, and the rest of the usually unstowable mass of gear that collects on a small boat, will find a home in the large sail bin under the bridge deck.



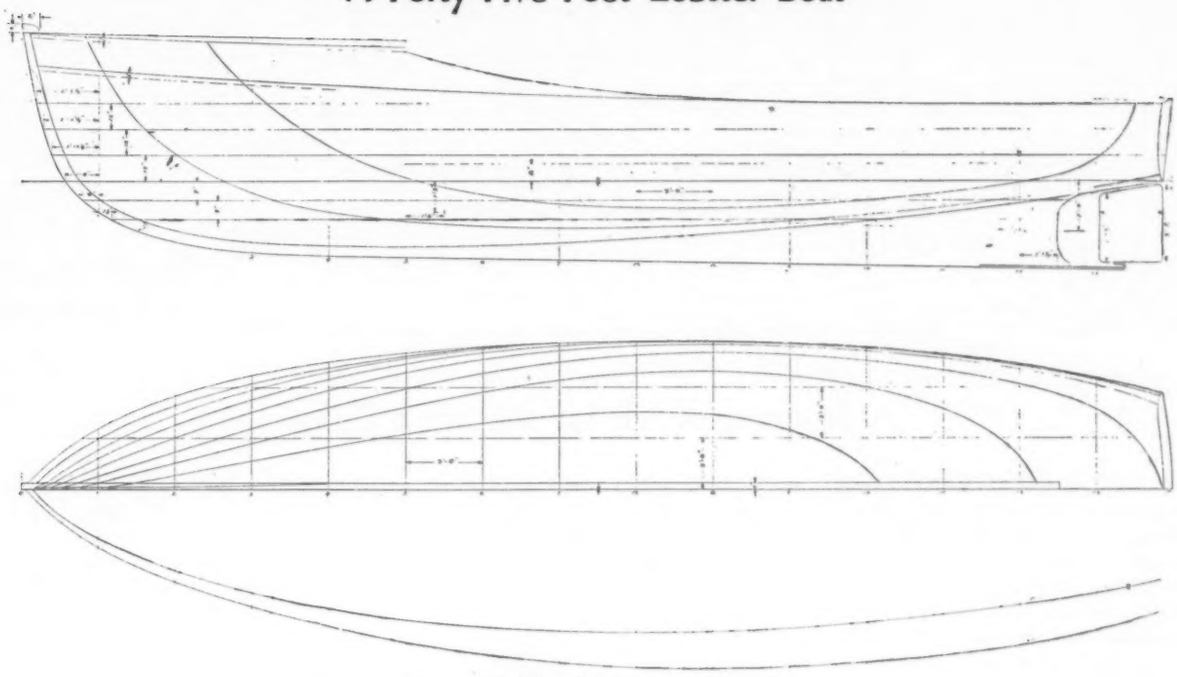
The body plan shows easy lines

She carries 800 square feet of sail



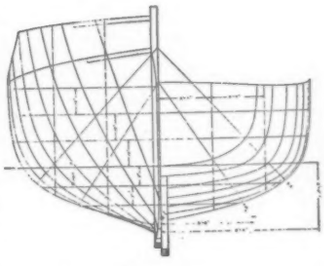
Accommodation plan of the new cutter designed by Francis Sweisguth

A Forty-Five Foot Lobster Boat



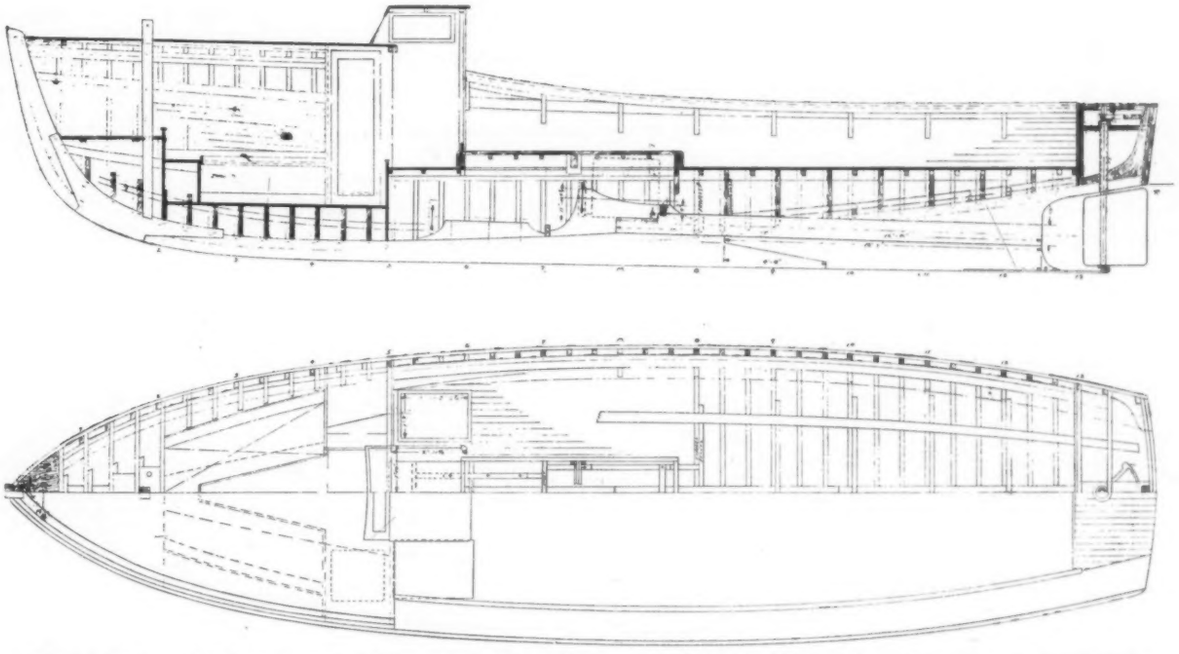
Sheer and half breadth plans and diagonals

DESIGNED by F. A. Fenger of Cohasset, Mass., for a Quincy client, this boat follows the recent trend toward a two-man boat with fair speed, reasonable running economy, and ability in rough water. She is 45′ l.o.a., 43′ l.w.l., 11′ 6″ beam and 3′ 6″ draft. Her displacement is 11 tons. Construction is sturdy, with 1½″ planking and 2″ by 3″ frames. After the day's work on the traps, she will be used as a party boat.

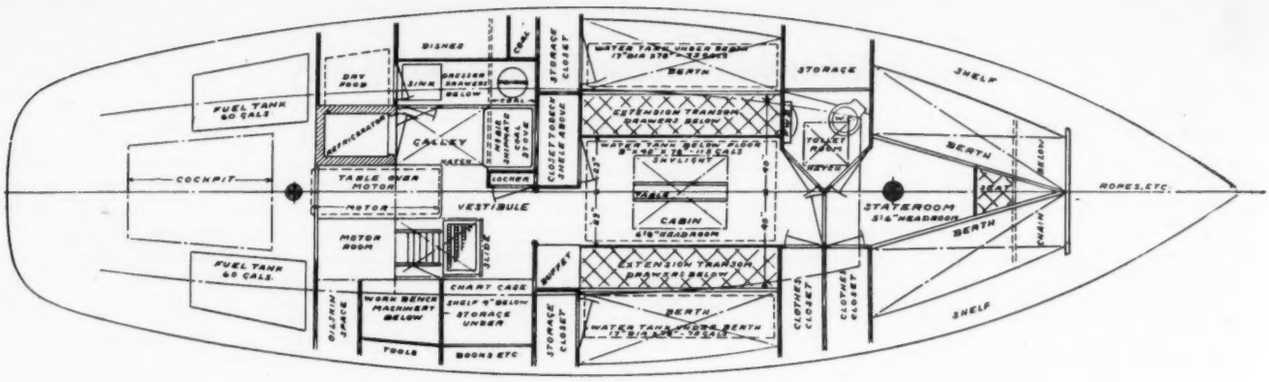


Body plan

As in most fishing craft, the freeboard along the working length of the boat is low, for ease in handling the traps, while the forward deck is high enough to divide the steep seas of a rising northwester and also give headroom in the cuddy. This is laid out with a pair of bunks, a toilet, and space for a Shipmate which is not only to be used for chowder parties but will also give warmth to the steering shelter. Wells are built in under the standing room floor.



Inboard profile and deck and accommodation plans. Notice the two engine beds, the after one for a low power emergency motor

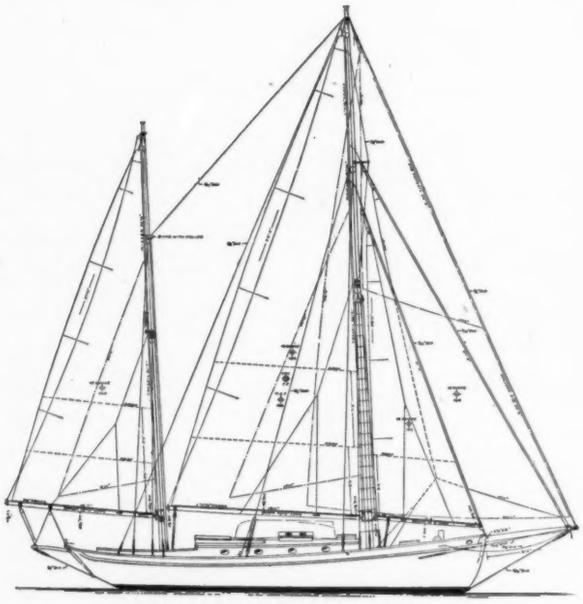


The interior has been laid out to accommodate six and to provide plenty of lockers

A Seagoing Ketch for the West Coast

THE ACCOMPANYING plans are those of an interesting auxiliary yacht from the boards of Ralph E. Winslow, of Quincy, Mass. She was designed for Gordon M. Gamwell of Seattle, Washington, who wanted an extremely seaworthy craft which could be handled by two persons without undue effort. He required, also, a vessel which would be large enough to accommodate six adults on long voyages. In addition, he wanted an unusual amount of storage space. He is planning an extended cruise in the Pacific Ocean and may possibly continue around the world.

The principal dimensions of the new auxiliary are: Length over all, 42′ 1½″; length on the water line, 34′ 3″; beam, extreme, 12′ 8″; draft, 7′ 0″. Her displacement is about 47,000 pounds and she carries 16,500 pounds of ballast, all iron. Of this, some 10,000 pounds are on the keel and the remainder is inside. Sail area is 1022 square feet.



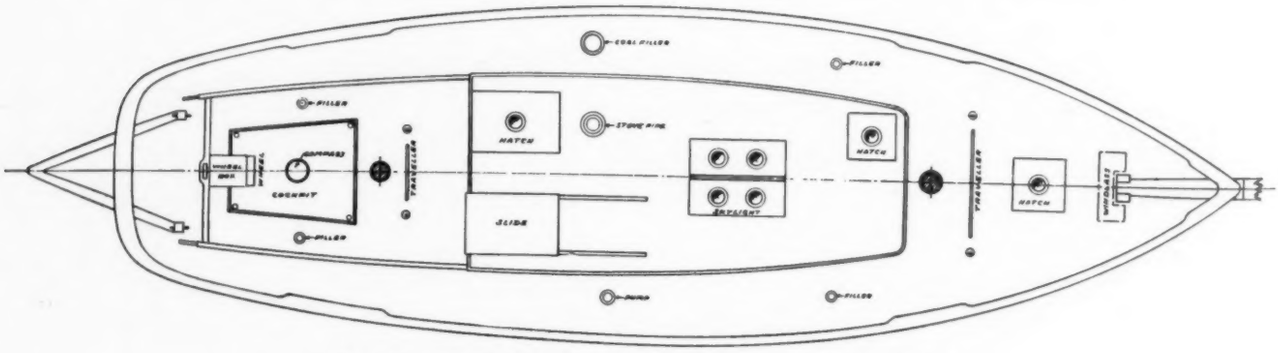
The yacht carries 1022 square feet of sail

The motor, which is installed under the bridge deck, is a Model F-4 Scripps fitted with a 2:1 reduction gear. It is rated 35–40 horse power. The fresh water capacity is liberal, being 265 gallons, while 120 gallons of fuel is carried.

Construction is strong, the deck space ample and the cockpit well has been kept small. At sea, the tender will be carried bottom up on top of the cabin trunk.

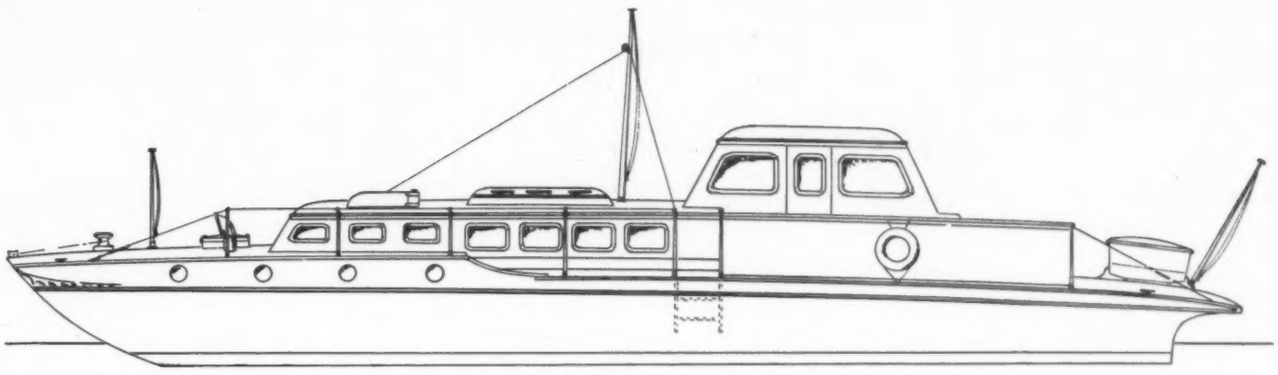
The plans show the arrangement of the interior. As the owner is 6′ 7″ tall, the headroom throughout the cabin is 6′ 8″, a desirable feature in a boat which will see considerable service in the tropics. Forward is a double stateroom with high berths and drawers under. Amidships is the main cabin, sleeping four, with buffet, table, four storage closets, etc. Between the main cabin and the stateroom is a well equipped toilet room, connecting with both. Aft is combined a galley, chart room and motor room. Many details have been worked out by the designer to make the craft livable for long periods.

She should be seaworthy, fairly fast on all points of sailing, stiff and able, and a boat that will steer herself.



The cabin trunk is fairly long and the cockpit well has been kept small

A Quadruple Screw Sea Sled Cruiser

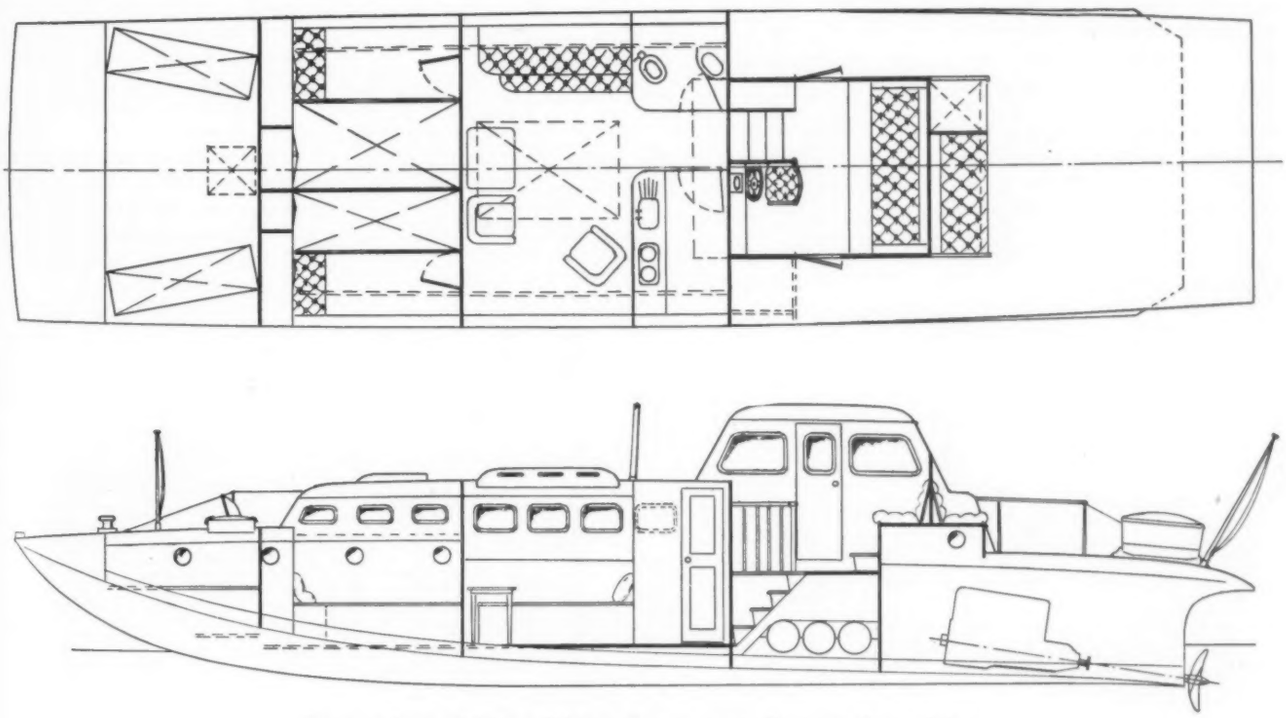


The outboard profile shows the influence of streamlining

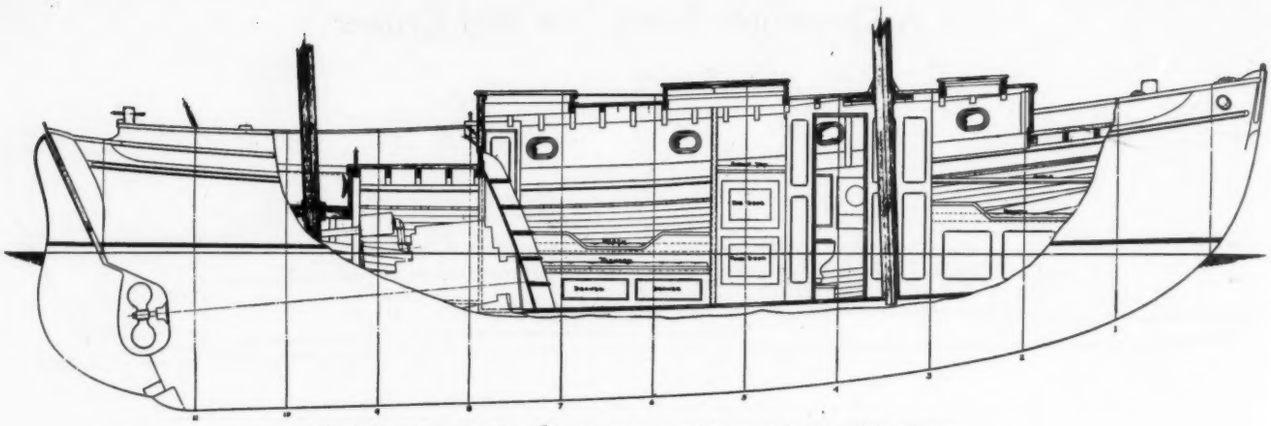
THOUGH differing radically in appearance from the usual speed boat, the sea sled model is of the true planing type and, moreover, seems to maintain speed even under adverse conditions. It is also well known as a weight carrier and has long been used in services which require a boat that can travel at a good pace even in rough water. During the war a number of large boats of this type were built and put into service. Though their history is largely unwritten, enough data were collected to show some of the possibilities of the type. In rough water, they almost never pound. Many of them were driven by four surface propellers, comparatively small power units being installed as at that time engines of the smaller sizes were better developed and more reliable than those of greater power. Since the war, the high speed, high power internal combustion engine has made rapid progress, both in reliability and efficiency. The quadruple screw arrangement allows the machinery to be located well aft, in a separate compartment, leaving the remainder of the vessel entirely clear for the quarters of owner and crew.

The boat shown herewith is 48′ molded length and 13′ extreme beam. She is designed for cruising speeds of between 25 and 40 miles an hour, depending on the amount of power installed. She has a raised deck forward, a long trunk cabin and a deckhouse aft. The hull is reënforced with steel girders, the aim being to produce a boat strong enough to go anywhere in any weather.

The great beam and nearly straight sides give her an unusual amount of room below deck, while the many large windows in the cabin trunk assure plenty of light and air. The crew is berthed in the forecastle, reached through a hatch in the forward deck. Next aft are two staterooms, one with a single berth and the other with a wide one. Then follows the main cabin, with a toilet room to starboard and a small galley to port. Aft is the deckhouse, with the helmsman's seat forward and a wide seat aft. Abaft the house is a shelter seat.



The great beam of the sea sled type gives an unusual amount of room below

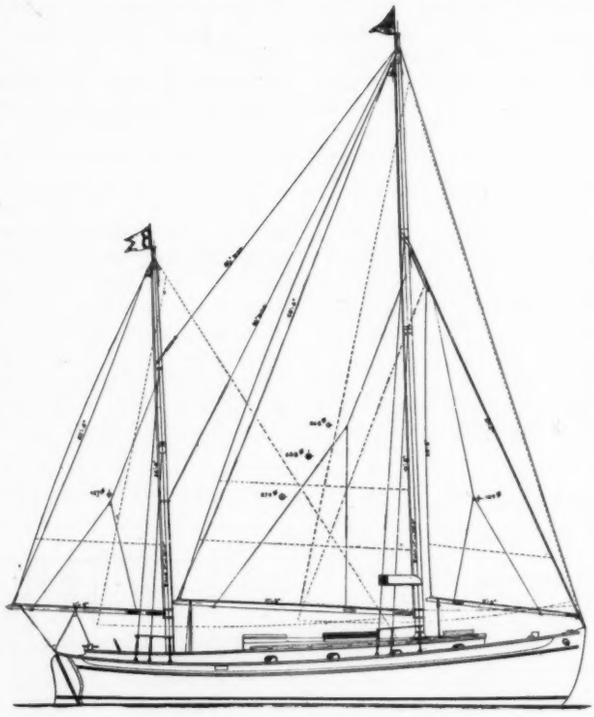


The inboard profile shows the long trunk cabin and the liberal headroom

A 40-Foot Motor Sailer by Warner

THE boat shown herewith is from the boards of Winthrop L. Warner, of Middletown, Conn. She is 39′ 6″ length over all, 36′ 0″ length on water line, 12′ 8″ extreme beam, and 5′ 0″ draft. While the hull follows rather closely along the conventional lines of boats of this type, the deck arrangement is different in having the usual shelter omitted as the owner prefers to be out in the sun and air, even putting up with rain now and then, rather than steer the boat from behind glass.

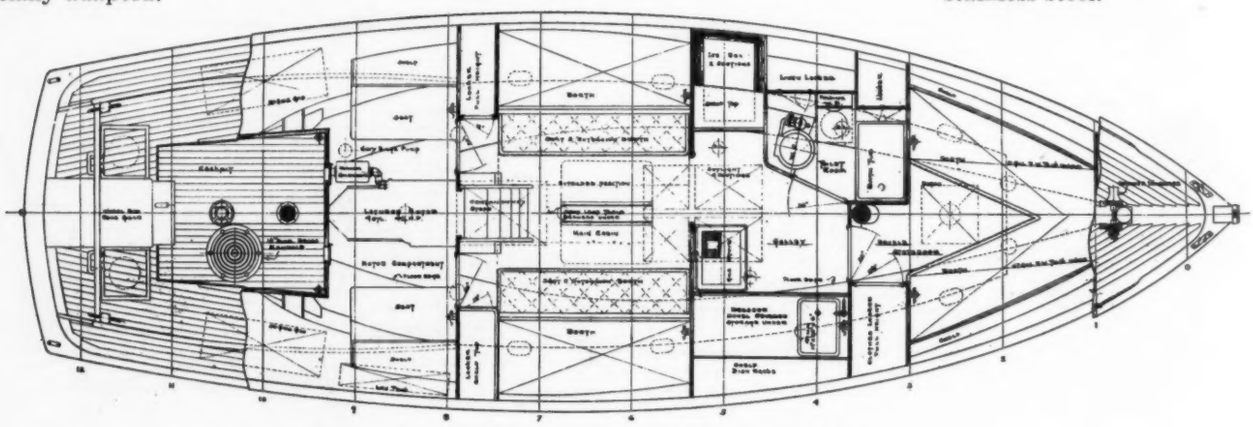
The construction is rugged, the boat being framed with oak and planked with Peruvian cedar. Everdur fastenings are used throughout. There will be 7950 pounds of lead on the keel and 3500 pounds of lead ballast stowed inside. The engine is a 4-cylinder 40 h.p. Lathrop. The steering gear is a Ross cam and lever type, especially adapted.



She carries 638 square feet in the three lowers

The arrangement plan shows a double stateroom forward with two built-in berths, under which are the copper water tanks, and a wardrobe. Next aft is the toilet room, to port, which is fitted with a small bathtub in addition to the usual fixtures. This room opens into the galley which extends the full width of the yacht. It is equipped with four-burner gas stove, sink, ice box, shelves, dish racks, etc. Next is the main cabin with sleeping accommodations for four — two fixed berths and two extension berths. Two hanging lockers are aft. The engine, with the two 50-gallon gasoline tanks, is under the bridge deck. Headroom throughout the entire cabin is 6′ 3″.

The yacht is rigged as a jib-headed ketch, the working sail area being 638 square feet. Spars are hollow and the standing rigging is of stainless steel.



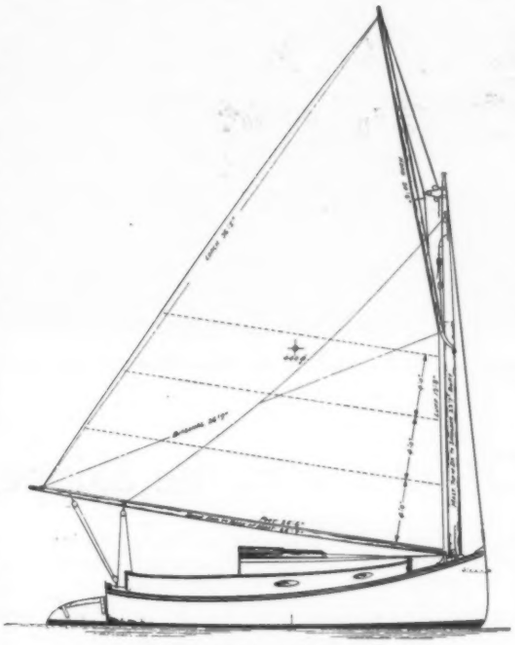
Accommodation plan of the new Warner motor sailer

A Real Cat with Traditional Features

THE DESIGNER of the peppy little boat shown on this page has wisely made no attempt to "improve" such a well established type as the real Cape Cod cat by abandoning the details of hull and rig which belong to the type. The cat boat is unique, and too often so-called improvements add little if anything to either looks, handiness or behavior.

The new boat, which is from the board of Fenwick C. Williams of Marblehead, Mass., is 24′ long over all, 23′ 3″ on the waterline, 11′ 8″ extreme beam, and 2′ 6″ draft with centerboard up. The hull profile shows considerable sheer with the bow perhaps a trifle higher than is usual in boats of this type. This gives deeper bury to the mast and so decreases somewhat the wringing stresses on the hull. This should tend toward increasing the life of the boat, assuming good workmanship in the construction, due to this lessened stress.

The rig is the traditional one, with a stout mast which is, except for the headstay, unsupported by any standing rigging. The large diameter of the stick is carried well up, as far as the jaws of the gaff, tapering off rapidly from that point to the head. The hoist of the mainsail is short, so that the center of gravity of the mast is not high. The boom is well cocked up to keep it out of the water when running free in a breeze of wind, and the shape of the sail, with its long gaff and lofty peak, is good looking and efficient. The boom pivots on a "crab" instead of a gooseneck, another traditional feature of the dyed-in-the-wool cat. This takes the thrust of the boom and prevents any crushing of the outside fibers of the mast which a gooseneck band is apt to cause. With an unstayed stick, such damage might be serious.

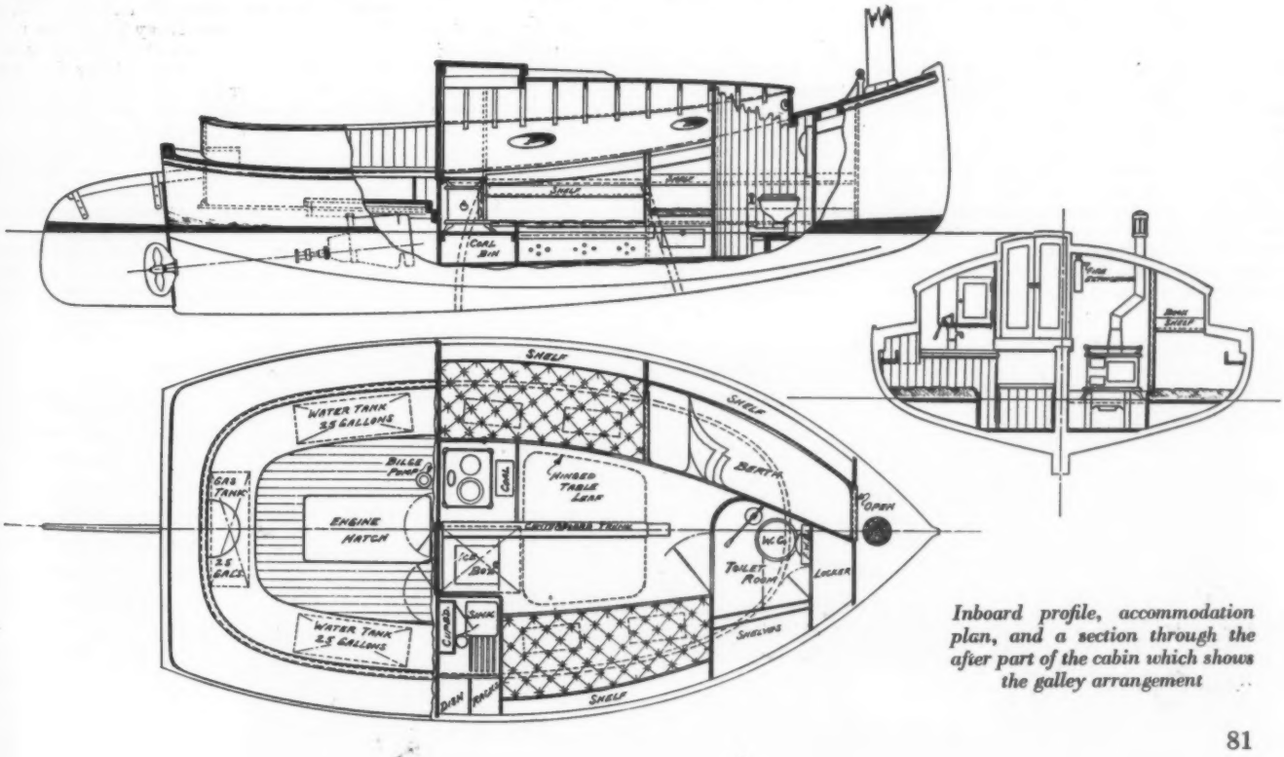


She carries the real cat sail

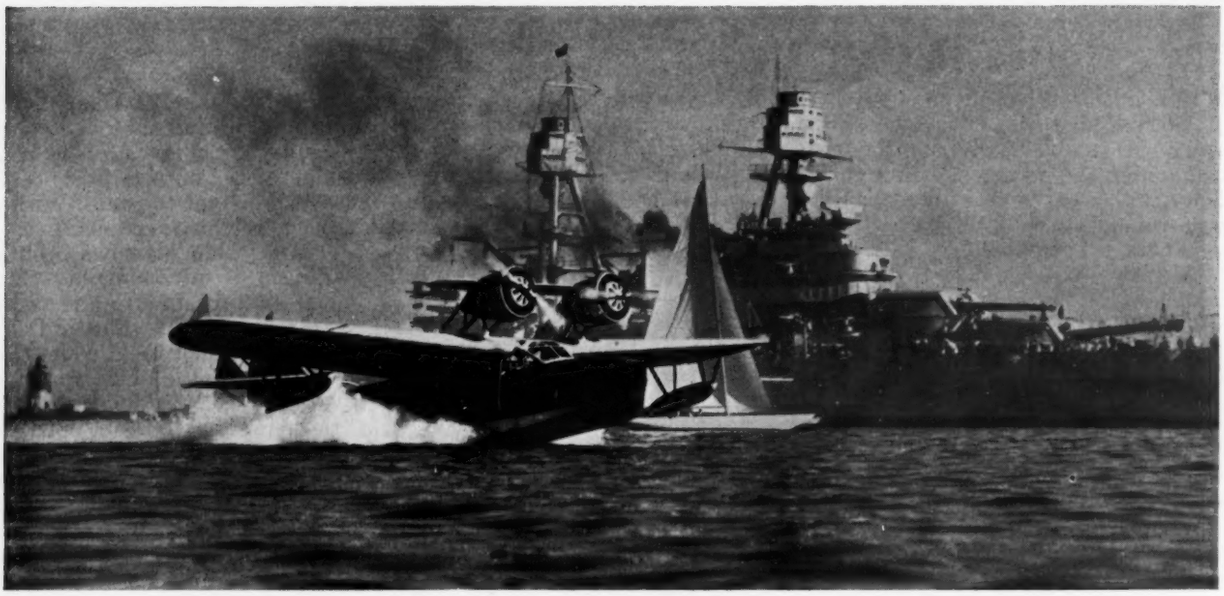
The cabin plan has been arranged to accommodate three, one on a fixed berth and two on transom berths. Forward is a separate toilet room while aft is a galley with sink, Shipmate range, ice box, dish racks and lockers along the after bulkhead. The regular folding table is fitted to the centerboard trunk. Headroom in the cabin is 5′ 3″ under the beams, above the average for a cat of this size, and is obtained by the high crown given to the house top.

The cockpit is roomy, with high coaming and fixed seats all around, and is watertight and self bailing. Under the seats are two 25-gallon water tanks and a gasoline tank of the same capacity. The engine, a 20 h.p. 4-cylinder machine, is installed under a low hatch with room for getting at both flywheel and coupling.

The rudder is "outdoors," as usual in this type, and another traditional feature is seen in the fixed lights in the sides of the cabin. These are of the long, narrow "cat's eye" pattern for which no lover of the genuine cat boat would substitute the conventional type.



Inboard profile, accommodation plan, and a section through the after part of the cabin which shows the galley arrangement



A Douglas Dolphin amphibian, D. W. Douglas' Six-Metre "Gallant" and the U. S. S. "Pennsylvania"

Of Interest to the Skipper

A New Opposed Piston Diesel Engine

NOW being exhibited for the first time at the Century of Progress in Chicago, is an opposed piston Diesel by Fairbanks, Morse & Co. Designed for installations where weight and space are at a premium, the weight has been brought down to 20 pounds per horse power, while improved scavenging has resulted in improved combustion efficiency. The engine has two short, large diameter crankshafts with a synchronizing connection, while the functions of regulating fuel injection—timing, pressure and quantity—are centered in a single lever. Response is rapid and accurate and the engine may be changed from idling to full speed in a few revolutions or maintained at any intermediate speed within narrow limits.

As the combustion space is between the pistons, combustion is improved and cooling facilities are better. The frame may be of rigid, light weight construction while parts not subject to stress, such as cover plates, etc., are of aluminum alloy. Built-in duplex rotary scavenging blowers are provided and scavenging is on the uniflow principle. Other built-in auxiliaries include lubricating oil pumps, fuel oil service and transfer pumps, and circulating water pumps.

The engines are available in five cylinder sizes, 5″ by 6″, 6½″ by 8″, 8″ by 10″, 10″ by 12″, and 12″ by 15″, and in 6, 7 and 8-cylinder combinations, with a 5-cylinder size in the smallest bore. Power capacities range from 50 to 300 h.p. per cylinder, or from 250 to 2400 h.p. per engine.

\+ + +

Scripps Powered

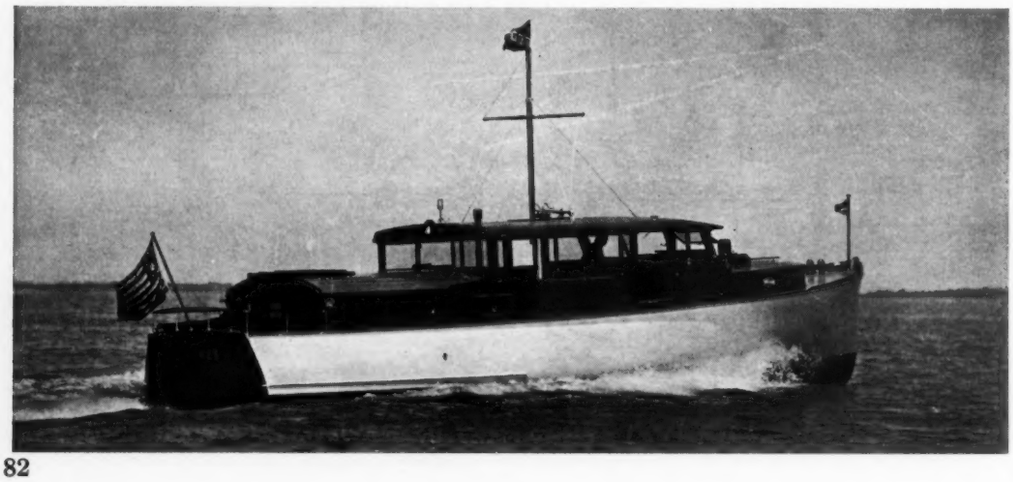
All three power tenders of the three-masted schooner yacht *Migrant*, we are informed, are driven by Scripps engines. The 27-foot runabout, which will be used for rapid transportation in port, is powered with a high speed Model 302 engine, a V-12 which develops 300 h.p. at 2400 r.p.m. Another owner's launch is driven by a Model 172, a 6-cylinder motor delivering 175 h.p. at 2000 r.p.m. The crew's launch has installed an F-6, a 6-cylinder 81 h.p. machine. Not often does a yacht of this type have all her motor launches powered with engines built by the same manufacturer.

Designers Join Forces

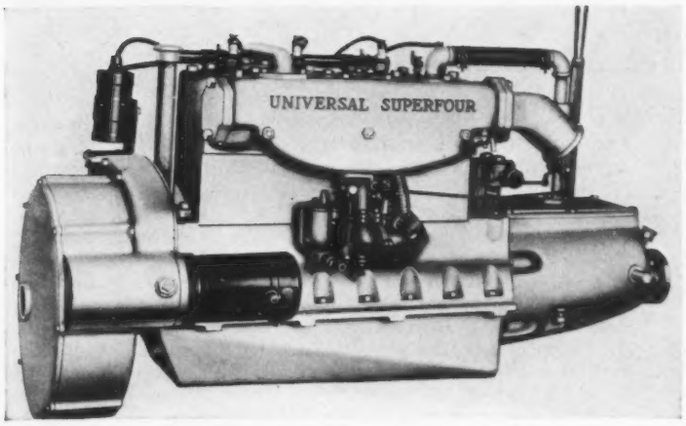
Philip L. Rhodes, Naval Architect, has recently become associated with the firm of Cox & Stevens, Inc., of 521 5th Avenue, New York. He is a graduate of Massachusetts Institute of Technology in the department of Naval Architecture and Marine Engineering. During his junior and senior years he acted as assistant instructor under Professor George Owen.

Upon graduation he worked on destroyer designs at the Bath Iron Works, then was employed in the Scientific Division of Hull Design at the Boston Navy Yard. Later, he served his time as ship fitter in the Lorain Works of American Shipbuilding Co., was construction foreman at the Union Shipbuilding Co. at Baltimore, and subsequently in charge of their New York Office.

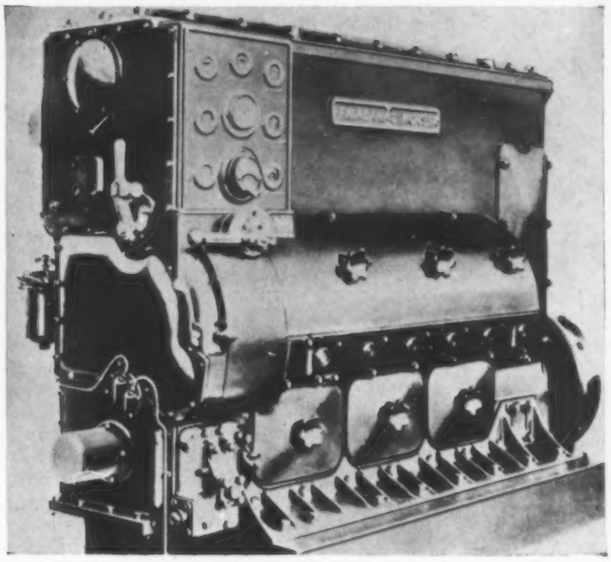
During the past ten years Mr. Rhodes has become well known in the yacht designing field. Boats from his board have been built in practically every country where there is any interest in yachting. Some of his better known designs in this country are the centerboard yawl *Ayesha;* the cutter *Skal* which took second place in the Transatlantic Race



"Cherokee," a Matthews double cabin deckhouse cruiser. Her twin Scripps engines, Models 154 and 155 of 110 h.p. each, drive her at a 20-mile pace



Port side of the Model SLG Superfour, the latest member of the Universal family



Right. One of the new opposed piston 2-cycle Diesels built by Fairbanks, Morse & Co.

of 1931; also the famous ketch *Tidal Wave*. In this design Mr. Rhodes departed from the conventional with eminent success. Another well known design is the cutter *Narwhal*. In her first season, 1931, she won four consecutive cruising races.

Mr. Rhodes' addition to the staff of Cox & Stevens will be of considerable interest to yachtsmen, as the firm is now well equipped to handle yacht and commercial designing work of any size or type.

\+ + +

Rough Going

On a recent test run, a new round bottom 23-foot runabout, powered with a pair of 69 h.p. Gray "Phantom" Light Six motors, covered the 123 miles between Cleveland and Detroit in 4 hours and 28 minutes, an average speed of better than 27 m.p.h. The motors turned a pair of 10″ by 12″ propellers 3100 r.p.m. for the entire distance. The lake was rough and there was a strong offshore wind blowing which made heavy going.

\+ + +

a.c.f. Cruiser Sales

L. B. Chapman, Manager of the Yacht Division of American Car and Foundry Company, reports the following recent a.c.f. cruiser sales:

30-Foot cruiser runabout powered with a Gray 8–100 motor to Benjamin Zukor, of New York. The craft has been named *Bee Z Bee*.

30-Foot double cabin cruiser powered with a Gray 6–40 motor to George C. White, of Rockville Centre, L. I.

24-Foot cruiser with Chrysler Ace motor to George H. Hawks, of Rochester, N. Y.

\+ + +

The Latest Superfour

A new Superfour, known as Model SLG, has just been added to the Universal line of marine motors. Equipped with electric starter and built-in reverse gear, it is offered at the lowest figure at which a Universal Superfour has ever been priced. With bore and stroke of 3¼″ by 4½″ and piston displacement of 148.3 cubic inches, it is rated at 40 h.p. though it actually develops 46.8 h.p. at 3000 r.p.m. and over 30 h.p. at 2000 r.p.m. It is 45 ⅝″ long, 17⅜″ between bolt centers and 25⅛″ high above the center line of crankshaft. Equipped for salt water, it follows the basic design of previous Superfours with a number of refinements.

Another interesting item of news from the Universal factory is the recent increased demand for engines burning kerosene. While the company has been building engines of this type for many years, most of them have been shipped to foreign countries. Of late, however, there have been many inquiries for motors with kerosene equipment. Certain Universal models require only a simple manifold and a few attachments for changing over to the less expensive fuel. These are the 18–20 Utility Four, the 25–30 Flexifour and the 40–45 Blue Jacket Six.

The new price list of Universal electric plants shows a substantial reduction in price, the average being 20 per cent.

\+ + +

Green Decks

Fashions in yacht painting change from year to year, and today green decks seem to be in style. The New Jersey Paint Works, Harry Louderbough, Inc., has put out four shades of green which are becoming popular. The new tints are: Venice Green, a light color with a bluish cast; Pacific Green, a delicate pea green shade; Tropical Green, an attractive grass green; and Australian Pine Green, a strong bright green. Color cards and complete information may be obtained from the manufacturers.

\+ + +

A Chris-Craft Cruise

A fleet of seven new Chris-Craft left the builders' yard at Algonac, Mich., on the morning of May 16th, bound for Cleveland, Ohio, with their owners at the helm. Though all but one were inexperienced, the trip was completed successfully. The fleet was made up of an open 18-foot utility boat, an 18- and a 21-foot utility model with glass enclosure, three 24-foot cruisers and a 24-foot utility cruiser.

The first stop was at Amherstburg, Ontario, for lunch, after the run through the

(*Continued on page 103*)

Seven brand new Chris-Craft left the builders' yard at Algonac, Michigan, and cruised in company to Cleveland with their owners at the helm

Books for the Yachtsman

Small Boat Building

By Edwin Monk

(Charles Scribner's Sons, New York, $3.00)

TO BE ABLE to build a boat with one's own hands is an ambition which most true boat lovers harbor, but the practical knowledge of exactly how to go about building a little boat is all too scarce and often not completely adequate. Consequently, the boat is never built. In what should prove a most successful effort to fill this need for more complete guidance, Mr. Edwin Monk, a naval architect of long experience in designing and building small boats, has written *Small Boat Building*. This attractive and practical book is not only a complete handbook for the amateur boatbuilder, but it goes a step farther and includes sixteen plans of desirable small boats. In it all those little details of construction, which so often prove a discouraging task to the beginner, are described clearly and concisely. In short, the book thoroughly instructs the reader *exactly* how to build and what to build.

The plans include an 8-foot snub-nosed pram, an 8-foot punt, an 11- and 14-foot skiff, two rugged 16-foot outboard boats for fishing or camping, and a 14- and 16-foot outboard runabout; also an outboard cruiser with two berths and galley, an outboard racer for Class B and E, 125 and 151 Class hydroplanes, and an inboard runabout. For the man who likes sail there is a 12-foot sloop of flat-bottomed construction, a 15-foot semi-dory, an 18-foot "Flattie," and a complete little 17-foot auxiliary cruiser.

In addition to these plans, in the first part of the book there are chapters which take up the various types of construction, dwelling on simplicity, materials, fastenings, assembling, and every necessary phase of boatbuilding procedure from the laying down of the keel to the final painting. Apparently difficult steps in construction are made easy and, with each step fully but simply explained and accompanied by excellent illustrations, the tyro should, with this book to guide him, be enabled to make his dream ship come true and realize that sense of pride and accomplishment which comes to the amateur boatbuilder as his boat grows and is finally launched.

C. L. W.

\+ + +

Millions For Defense

By Herbert L. Stone *and* Alfred F. Loomis

The Derrydale Press, New York. $7.50

HERE is the history of the racing for the America's Cup, from its winning by the fleet schooner yacht whose name it bears down to the preparations for this year's contest, when the fifteenth challenger will meet our best off Newport. The introduction outlines the events of that August day in 1851 when the American invader defeated the flower of the British yacht fleet in a race around the Isle of Wight, and comments on the marked improvement in sporting ethics which has developed in the subsequent three-quarters of a century. In the old days, "A match was won when it was made" and each side endeavored to obtain every advantage before the start. Today both parties to the race wish only the fairest terms and seek no favors.

The story of the first race and of the fourteen contests for the famous Cup are told in a few words, and told with a touch of humor in the authors' comments on the long-winded sea lawyers' squabbles about conditions and the attitude of press and public toward the presumptuous invader who sought to deprive us of our hard earned trophy. The book is, however, mainly a pictorial history and the illustrations form a remarkably fine series of yachting pictures. For the older yachts and the earlier races, contemporary drawings, paintings and prints were selected, many of them pictures never before published. The artistic quality of most of these will appeal to all, but even the reproductions of some of the cruder lithographs are extremely interesting to the yachtsman. The photographs, reproduced by a process which preserves all the minute detail of the originals, are splendid portraits of the yachts which have competed for the great trophy. Some are exciting, seeming to carry with them into the printed page the salty tang of the sea. The captions accompanying them are clear and furnish not only a description of the races but a pungent running comment on the sportsmanship of the day. Technical data of challengers and defenders are given, as well as a tabular history of the races sailed for the Cup.

The book is an exceedingly handsome one, with its large pages, clear typography and beautiful illustrations. The edition is limited to 950 numbered copies and will soon, unless all signs fail, become a "collector's item." The authors are, of course, too well known to need any introduction to the readers of YACHTING.

C. H. H.

\+ + +

Men, Fish & Boats

By Alfred Stanford

(William Morrow & Co., New York. $3.00)

THE old saying is that: "The first hundred years of fishin' is the hardest," and when one looks over the pictures in *Men, Fish & Boats* he can well believe the truth of the adage. For commercial fishing, perhaps the hardest trade in the world, is here illustrated with more than a hundred action photographs that give an idea of the difficulties of the fisherman's life. A member of one of the oldest industries there is, the commercial fisherman still works on shares and may finish a trip to the Banks as poor as when he started.

The book presents the pictorial story of the rugged men who sail to the fishing grounds, with many "close ups" of them at their work, baiting trawls, swinging a dory over the side or mending nets. The boats are pictured in all stages of their careers, from the building ways to the finish by fire, stranding or storm. There are photographs of such famous craft as the *Bluenose, Thebaud, Elsie* and *Henry Ford,* in races — boat for boat and no time allowance — or returning from the Banks with decks and rigging a mass of flinty ice. Steam trawlers give the modern note, bucking their way into and through cresting seas or wrestling with their enormous nets. Nor are the swordfishermen neglected and a number of exciting pictures of this branch of the fisheries are presented.

The book, which was designed by Gordon Aymar, presents the cream of some 40,000 photographs, a gorgeous collection of action pictures.

\+ + +

Lloyd's Register of American Yachts

(Lloyd's Register of Shipping, New York)

COINCIDENT with the issue of the thirty-second edition of the American yacht register, Lloyd's Register of Shipping will celebrate this year its one hundredth anniversary. The origin of Lloyd's dates back much further than this, to the Coffee House of Edward Lloyd in Tower Street, London, at least as early as 1688; a meeting place of merchants and shipping men from which grew the two great organizations now bearing the name of Lloyd.

Of the 5338 yachts listed in the new Register the oldest is still the famous schooner *America.* The youngest, launched just as the Register comes from the press, is the cutter *Rainbow,* built for the fifteenth contest in defense of the America's Cup. Next in point of age is the sloop *Annie,* modeled by Capt. Bob Fish in 1861. Taken to San Francisco in 1870, she is still in use on San Francisco Bay. Another veteran is the sloop *Viola,* built in New

(Continued on page 110)

ESSOMARINE PRODUCTS WIN ALBANY to NEW YORK MARATHON

Essomarine oils are available in 1- and 5-gallon containers, and in drums and half-drums. Essomarine greases are available in 1-, 5-, and 25-lb. packages.

ESSOMARINE ENGINE OIL — high viscosity index insures instant lubrication when cold, and maintenance of body under continuous high temperature. Available in 5 grades: Nos. 60 (SAE 30), 80 (SAE 50), 100 (SAE 50), 120 (SAE 60), 140 (SAE 70).

ESSOMARINE GEAROL — for independent oiling of reverse and reduction gears and oil-type universal joints. It adheres to gear teeth under all conditions, insuring perfect lubrication, cushioning and protecting against wear, and reducing noise.

ESSOMARINE WATERPROOF U. G. LUBRICANT — developed especially for outboard underwater gears, open reduction and reverse gears, grease-type universal joints, and ball bearings of propeller shaft or drive shaft. Unaffected by water. Contains no solid matter — no acids to pit or corrode bearings.

ESSOMARINE WATERPROOF CUP GREASE — for stuffing boxes, stern bearings, and all grease cup applications. An ideal packing for the water pump. Water, fresh or salt — hot or cold, has no effect on it.

ESSOMARINE BREAK-IN OIL — refined and blended for high film strength and oiliness to protect the engine during the critical early part of its life. Recommended for use during the first 50 hours' operation in a new or rebuilt engine.

Essomarine

REG. U.S. PAT. OFF.

OILS & GREASES

PENOLA INC., 26 BROADWAY, NEW YORK CITY

6 OF FIRST 10 BOATS IN 132 MILE GRIND USED ESSOMARINE PRODUCTS

"Chart" Johnson, 23-year-old amateur, who won the Albany-to-New York Outboard Race on May 13th, used Essomarine Products.

Six of the ten entrants using Essomarine Products were among the first ten to finish in this, the country's longest and most grueling outboard motor boat marathon, in which only eighteen of the sixty-six starters survived.

Sixteen of the twenty-four prizes went to users of Essomarine Products.

TRENTON TO PHILADELPHIA RACE ALSO WON WITH ESSOMARINE PRODUCTS

Five of the six entrants who used Essomarine Products in the Trenton-to-Philadelphia Shuttle Race on May 19th—including the winner, Fred Jacoby—finished.

Though on the market for only four months, Essomarine Products are backed by fifty years of experience in the development and manufacture of specialized lubricants.

You'll find that Essomarine Products are conveniently available at barges, floats, docks, marine supply houses and garages operated or supplied by the great oil companies listed below. Look for the Essomarine sign.

STANDARD OIL COMPANY OF NEW JERSEY . 26 Broadway, New York City
COLONIAL BEACON OIL COMPANY, INC. . 30 Beacham Street, Everett, Mass.
STANDARD OIL COMPANY OF PENNSYLVANIA . . . . Philadelphia, Pa.
STANDARD OIL COMPANY OF LOUISIANA . . . . . New Orleans, La.
STANDARD OIL COMPANY, INC., IN KENTUCKY . . . . . Louisville, Ky.
STANDARD OIL COMPANY (OHIO) . . . . . Cleveland, Ohio
HUMBLE OIL & REFINING COMPANY . . . . . Houston, Texas
IMPERIAL OIL, LTD. . . . . Toronto, Ontario, Canada

"Antares" Goes to Panama

(Continued from page 46)

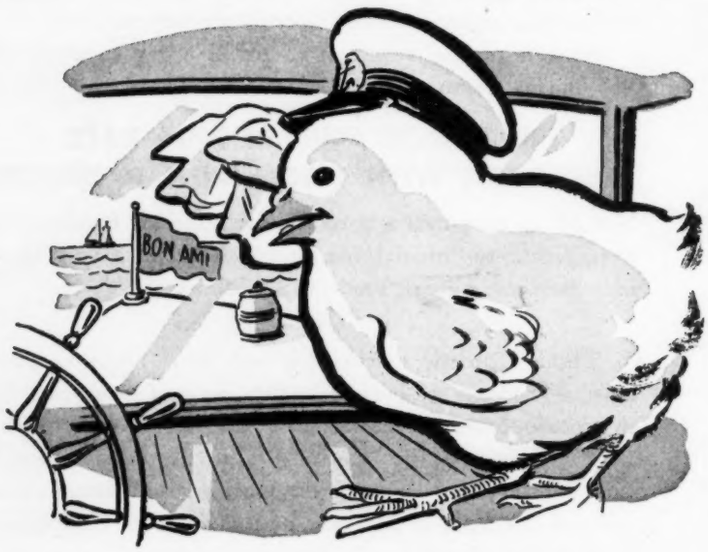
levers are turned to "Finished with Engine" and a strange stillness settles down over the pilot house. Only the occasional staccato clicking of the gyro-compass repeater breaks the silence. There is a faint clatter of dishes far below in the galley. It suddenly comes to your consciousness how the vital throbbing of machinery seizes upon you and drives you about your daily tasks. You feel limp and listless but delightfully relaxed. What's that! There goes the Diesel lighting set. He ought to have those batteries up after an 18-hour run. Oh well, might as well get going.

"Come on boys, let's get the boats overboard." The cover is stripped off, the gripes removed. The winch (electric, thank heaven) grinds. Up she goes, out she goes, and down she goes. Various projects are afoot — swimming on the beach, paying respects to the port authorities, and fishing. All three worked out very nicely. There isn't much to do ashore in the Bahamas, unless you would like to buy a sponge or perhaps some shells. The former rum runner's heaven is no longer paying dividends and all the natives have that "Yon Cassius" look.

The shaded light in the radio shack often burns late. This night it was on at ten. Britt expertly tuned the long wave receiver to the monotonously liquid tones of Arlington and began to pound away on the typewriter. How he can receive a weak signal through all that clatter will always baffle my lesser genius. I looked over his shoulder. I never get there in time to receive a weather report anyhow. To my disgust, I read: "Tropical disturbance of great intensity central fifty miles south of Turks Island, Bahamas, moving slightly north of west at fifteen miles per hour. Extreme caution advised shipping on or near path." That was something to go tell the skipper about! Turks Island is only about five hundred miles from Bimini and Bimini was right on that path. It was necessary to remain at anchor until the next morning to get a Bill of Health. After that it didn't take long to shake the dust of the Bahamas off our feet.

Antares passed out into the Gulf Stream to gain a sufficient offing to clear all dangers between Bimini and Matanilla Buoy. The sea was calm and no fiddles were needed on the table. Conch chowder and baked cero mackerel were on the menu. It seemed cooler than previously, though the thermometer read the same. Britt, with characteristic industry, was working the radio direction finder. I watched the loop swing through a broad arc, then come to rest and oscillate slowly about some pointing. My eyes were nearly shut as I lay on a mattress under the awning which covered the after house. One of our tame (?) coati mundis was busily fishing in Dr. Beebe's glass aquarium. Perched precariously on the rim, he groped about in the water with one paw, meanwhile gazing off into space with a vapid, empty look. (Incidentally the coatis had developed quite a taste for flying fish specimens.) The watch, sunburnt, shirtless and white-hatted, walked from port bridge to starboard, gazing off at the fast disappearing palms of the Bahamas, watching the nearby water, the rigging, the sky and sea. Someone brought him a bottle of beer and, swinging a leg over the bridge rail, he quaffed off the cool, brown brew. By his manner and bearing, his new-found assurance, I could sense in him a convert. The strangeness had worn off, he had come to love the sea. He, as I, would yearn for the sparkling blue waters of the far south when tired and bored of a dreary winter evening. The infusion was in his blood and

The busiest member of your crew is Bon Ami Chick the Sailor...



And when it comes to polishing the windshield, and keeping windows and other parts glistening clear, the Bon Ami Chick is at his best! Even those stubborn salt water marks are a "cinch" for him!

You'll find him equally good at . . .
cleaning and freshening paint,
making the galley spotless,
shining the brass fittings,
keeping the lavatory sanitary,
making all cleaning easier.

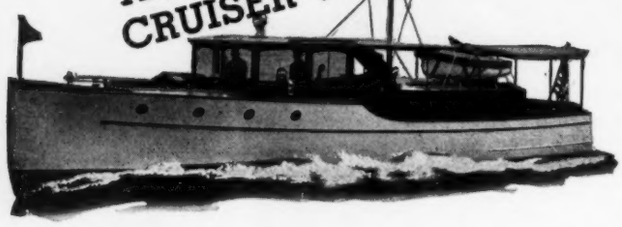
Always keep a package of Bon Ami—either *Powder* or *Cake*—aboard your boat. It polishes as it cleans . . . keeps everything bright and shipshape.

KEEP YOUR BOAT CLEAN WITH BON AMI

HENNESSY. . . *That's all you need to know about Brandy*

Sole Agents for the United States: Schieffelin & Co., *22 Cooper Square, New York*—IMPORTERS SINCE 1794

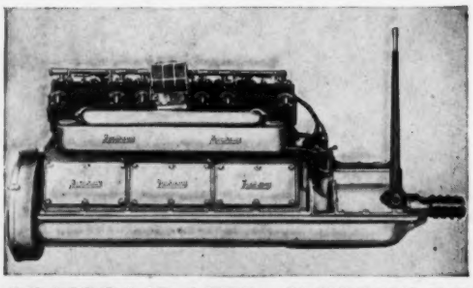
CONSOLIDATED OFFERS AN UNPRECEDENTED CRUISER VALUE



FOR just a trifle more than you would have to pay for an ordinary stock cruiser of similar dimensions, you can become the owner of this beautiful, custom-built CONSOLIDATED yacht. Built by artisans whose craftsmanship is a tradition and who take great pride in the character of their work, this boat represents the most unusual cruiser value ever offered by any builder. The CONSOLIDATED name plate is your assurance of the utmost in quality, beauty and seaworthiness.

Length 47 feet: two cabins, each with separate toilet room, provide comfortable sleeping accommodations for six: Captain's room forward: also complete galley. Powered by SPEEDWAY.

This boat cannot be adequately described in words. You really should see it to appreciate its graceful beauty and luxurious appointments. We suggest that you do so at our shipyards. A running demonstration may be arranged.



Write or telephone and let us know when you can come to inspect this fine cruiser.

CONSOLIDATED SHIPBUILDING CORP.
Morris Heights New York City
Designers and builders of pleasure and commercial craft and their propelling machinery since 1885

years of separation from the tropics would not dim the love of it. He would have to come back some day.

Britt's bearings were not without result. He found us to be making 11¼ knots with the aid of the Stream. This speed brought us abeam, though out of sight of Matanilla, by 6:00 P.M. Here the course was altered to 11° True, for Diamond Shoal Lightship.

Nine of the evening of July twenty-eighth found Diamond Shoal Lightship close ahead, with Hatteras blinking a welcome further inshore. Ahead, eight south-bound steamers bore down upon us, three and four abreast, while a lone one led the charge. Had the depression ended while we had been away? The skipper remarked that this would be a good corner for a cigar store.

H.O. 211, checked by Britt's ever skeptical direction finder, found Overfalls at nine the next evening. The wind had been light west all day and we were thoroughly bitten by mosquitoes while still thirty miles offshore — the only mosquitoes that we had seen all summer!

Britt and I divided the watches up the river. Ship John Light was just astern when I came on deck at

The work of collecting specimens continued while "Antares" was under way

1:00 A.M. There was some traffic as we ran up the Liston Range, passed the dangerous tip of Reedy Island dike (running dead slow); then, speeding up again, carried on upstream with a strong favorable tide. *Antares* came to anchor off Quarantine shortly after four in the morning. We anchored close to the station in the hope of getting pratique early and reaching Essington before the tide had begun to drop.

At the Corinthian Yacht Club, *Antares* was able to get alongside in good order, the tide being down only about a foot. When we attempted to warp her into the basin, however, she stuck fast in the entrance and it was necessary to run her out into the stream and anchor.

\+ + +

The cruise was over. The only sad note is struck now (in February) when I see poor *Antares* in her lonely ice-rimmed slip (I walked completely around her on the ice one day), a great canvas cover concealing her sleek black hull, her cabins frosty and deserted as she lies hibernating till another summer rolls around.

Have Confidence *in* Your Yacht Engines

"THOSE are great engines. They've never failed me in anything I've called on them to do!"

This feeling of enthusiastic confidence in his Cooper-Bessemer yacht engines was recently expressed by one of the leading automotive engineers of the country.

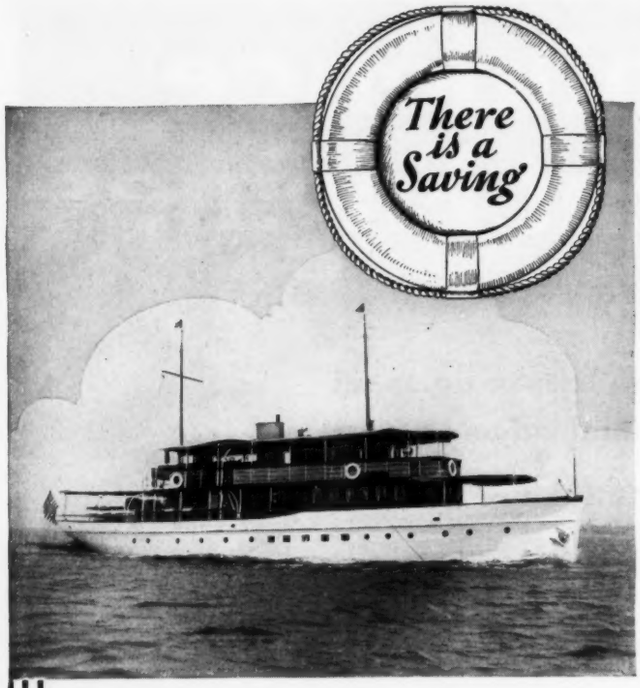
Every yacht owner should have the same complete confidence in both his main and auxiliary power plants.

And every yacht owner can, if he chooses diesel engines of Cooper-Bessemer make.

THE COOPER-BESSEMER CORPORATION
GENERAL DIESEL SALES OFFICES: SUITE 301, 25 W. 43rd ST., NEW YORK CITY
PLANTS: MOUNT VERNON, OHIO GROVE CITY, PA.

The distinctive Torino III, owned by Theodore C. Hollander, and powered with two Cooper-Bessemer 550 H. P. main Diesel engines and a pair of 50 K. W. generating sets was designed by Henry J. Gielow, Inc. and built by Bath Iron works. Torino III is 155' long, with a beam of 26' and a draft of 9'.

COOPER-BESSEMER



There's a saving in insurance cost to yacht owners on an Atlantic Policy.

The Atlantic is a mutual marine insurance Company and shares its profits with policyholders. The present cash dividend rate of 15% means a saving of that amount on a yacht insurance premium.

The Company pays the regular dividend to all policyholders whether they have a loss or not.

Atlantic Mutual policies are non-assessable and afford the broadest coverage available.

Atlantic Mutual is the largest mutual marine insurance Company in the World and has a record of nine decades of prompt and equitable settlements.

Send for free YACHT "FACTS" booklet which gives further information.

ATLANTIC MUTUAL INSURANCE COMPANY

Home Office

Atlantic Building, 49 Wall Street, New York

Branch Offices

Boston, 33 Broad Street
Chicago, 175 West Jackson Blvd.
Cleveland, 1370 Ontario Street
Philadelphia, 401 Walnut Street
Baltimore, South and Water Streets
Washington, 1427 Eye Street, N.W.

Use Coupon

ATLANTIC MUTUAL INSURANCE CO. Y-7-34
49-51 Wall Street, New York

Please send me a copy of your yacht booklet "Facts" which gives detailed information regarding yacht insurance on your mutual plan. I understand it is free.

NAME

ADDRESS

CITY STATE

As the Atlantic Mutual recognizes brokers it will be in order to send this coupon through your broker.

A Line Squall off Cape Hatteras

(*Continued from page 42*)

day on the starboard tack. The wind increased, possibly to Force 6, but I have never seen shorter or steeper seas with so little wind. They were portentous seas, and they came in series. *Temptress* would rise to the first two, but the third would stop her dead, and she would fall off to leeward. She is a dry boat, but that day she lost all the varnish on her booby hatch, not to mention the bowsprit, and torrents of water rushed aft. *Temptress* had not been sailed hard all winter, and the tropics had dried her topsides. We pumped her every hour that day, and we always wondered if the pump would suck.

The seas became worse, and I didn't dare to drive her. The motor was kept idling, and we sailed her very scant of wind, looking for the beach to leeward. Steamers passed to leeward; so far, so good. A freighter came up astern, under slow bell. It was heavy going for her, too, and we kept her in sight for hours until she melted in the haze two points to windward. If we could only do as well.

Noon weather report, Norfolk, "Fresh NE and E," which was no news. We prayed for the wind to haul easterly, but it stayed in the NE and blew some more. Cloudy all day.

The line squall hit at 10:00 a.m. and we raised the beach about one o'clock that afternoon. I said it was a steamer, but it wasn't a steamer, it was a large building on the beach. At two we raised Bodie Light in the NW. The Platt Shoals in this vicinity have six to eight fathoms over them. And now the seas became really bad. If the motor failed, I might have clawed offshore on the port tack, but I do not know. A motor is a life saver on any small yacht.

We were close to the beach near Nag's Head at five. I could see the breakers. We tacked and stood offshore for an hour. The seas seemed worse on the port tack. We came about and tried it again, but we were too close to the beach. At dusk the white dunes of Nag's Head glowed in the failing light. They were dead ahead. Tacked and put to sea for three hours. My watch below, and I could sleep with the open ocean ahead. We were clear of all shoals. Bodie Light bore SW½ W at 10:30 p.m. We tried the starboard tack again. The seas were not quite so bad, though they were steep enough, and we should raise Currituck Light before we went ashore.

May 19th. On a lee shore. I slept the rest of my watch below, and Don raised Currituck lighthouse at 2:30 a.m. It was abeam by four, and then the wind hauled a point. We could sail north.

False Cape whistler was abeam at 7:15 next morning and we began looking for the land. Found it at eight o'clock, and it was not a pleasant sight. The seas had let down a trifle, or we had become accustomed to them, and the little motor chugged sedately until it coughed a few times, about ten o'clock — and died. The gasoline tanks were empty.

By that time Virginia Beach was abeam and Cape Henry Lighthouse appeared dimly over the port bow. The breeze was no fresher, so we shook out the reefs in the mainsail, and windjammed up the coast, N½W with started sheets. Good old crock!

At noon Cape Henry was brought abeam, and we sailed into the bay in a nasty tide rip but, oh, my fellow yachtsmen, with eased sheets. With a fresh breeze it is an afternoon's sail into Hampton Roads.

Temptress lay at anchor in Hampton Creek by five — three and a half days out of Charleston. We had beaten the *Sea Horse* and Old Ocean as well.

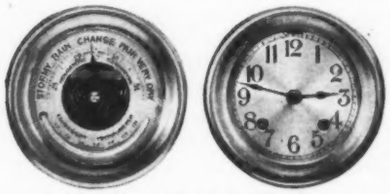
"To a good host"

We have a wide variety of gifts for yachtsmen. If you would like to send some token of appreciation to your host, we can help you to make a suitable selection.

Send for catalog "Play Hours"

The Whearylite Companion Bag

A perfect bag for the owner. Keeps uniform and supply of shirts in perfect press. Suit hung on detachable hanger. Extremely light in weight (54 oz.). Size, 2"x18"x24". Packs away in locker. In tan waterproof canvas, bound leather with all-around zipper opening.....$9.50



Chelsea Marine Clocks

Used by the U. S. Navy, Merchant Marine and leading private owners. Prices are the lowest for many years. Solid brass or copper bronze, moisture-proof, lacquered cases.

2¼" dial Clock without strike	$25
2¼" dial Barometer	29
3¾" dial Clock with ship's bell strike	60
3¾" dial Barometer	30
4½" dial Clock with ship's bell strike	65
4½" dial Barometer	30
6 " dial Clock with ship's bell strike	70
6 " dial Barometer	40

Send for folder illustrating models for boat or home

ABERCROMBIE & FITCH CO.

The Greatest Sporting Goods Store in the World

MADISON AVENUE AT 45th STREET, NEW YORK

CHICAGO STORE: A&F

Von Lengerke & Antoine, 33 So. Wabash Ave.

Then and Now

(*Continued from page 50*)

on the Canadian side of the St. Clair River, to take on wood, while sundry bottles of brandy, wrapped in thick woolen underwear, are smuggled aboard with duty unpaid.

Today, those who go down to the sea in ships must go in ships of oil, steam and electricity. They must know a different kind of sailing; how to harness dynamos, turbines and complicated machinery. They gauge their progress by the revolutions of huge screw propellers and their safety is assured by sounding machines, their courses checked by radio beacons; they are warned away from shoal and reef by blasts of mechanical horns and whistles, while on every side flash gas beacons of red and white and lights from tall lighthouses.

Yet, still, responsibility rests upon the shoulders of the captain.

\+ + +

In Praise of The "Raging Canawl"

(*Continued from page 68*)

passing a tow before reaching the lock limits. Just the everyday tides and so on to think of. Following the chart, we chugged along, the rest of the fleet trailing us dutifully. Off Rhinebeck there was a yell from astern, and we saw the other boats heading out into the middle of the river. Someone's steering gear had gone wrong and the first report was that the boat had touched bottom — in ninety feet of water! Along into the Highlands and through Haverstraw Bay, which was smooth for a change. There we tried some squadron maneuvers and did some picture taking, signaling with the foghorn thrust into the megaphone. Off Yonkers we passed U. S. S. *Salt Lake City* at anchor and then ran on past the fighting ships to Duffy's Landing, where the voyage ended. Here the fleet split up, the boats going on to their various home ports from Dark Harbor, Maine, to Washington, D. C.

It was a great cruise. Exceptional weather, with not a drop of rain the whole way. A congenial crowd, without a grouch in the lot. Fine management, with gasoline and water and food supplies at the end of each day's run.

I want to go back and do it again, taking plenty of time to loaf along the way.

His Late Majesty King William IV

Engraved after an original drawing expressly for Bell's Weekly Messenger, 1830

Gentlemen, the King!

If younger whiskies fail to agree, try King William and see how much better a mellow old Scotch will treat you. The difference in cost is very slight, but the difference in quality is tremendous. King William is on call at the best cafes and hotels. Every case delivered from a U. S. Customs bonded warehouse. Sole U. S. Distributor, Bluebell Importing Corporation, Graybar Building, New York.

KING WILLIAM IV

V·O·P

SCOTCH WHISKY

JOHN GILLON & CO., LTD.

Established 1817

GLASGOW and LONDON

By Appointment to His Late Majesty, King William IV

This advertisement is not intended to offer alcoholic beverages for sale or delivery in any state or community wherein the sale or use thereof is unlawful.

If a wood screw were bent . . .

Yes, and it is just as inefficient to run a boat with a propeller out of pitch. The modern propeller works on exactly the same screw principle. If revolutions fail to produce expected speed or if you have hit a submerged object, call at the local Hyde dealer. He will put on your spare wheel and check the used one. If removed wheel is damaged, it should be reconditioned at the factory. Every Hyde Propeller whether new or reconditioned is checked and rechecked before it is delivered. Hyde Bronze is the toughest known bronze. Time has proven the quality of Hyde Propellers.

Send for this free booklet "Propeller Efficiency." It will tell you why Hyde Propellers often increase the speed of a boat and always get home safely. Hyde Engineering Department is always at your service to suggest the proper wheel.

HYDE WINDLASS COMPANY
Bath, Maine

Dealers everywhere carry ample stocks

HYDE
PROPELLERS

"Fins" Off Nomans

(*Continued from page 39*)

"C's" of the litany. It is always the part of wisdom to ask just where the fish are taken from day to day. The freemasonry of fishermen, that is, commercial fishermen, is proverbial, about the only thing that lifts their bristles being a hail from too far aloft. Don't worry about stores, solids, liquids, or otherwise. They are at hand, and may be had; but on the other hand, don't expect ten-minute service when there are eighteen to twenty miles to be traveled.

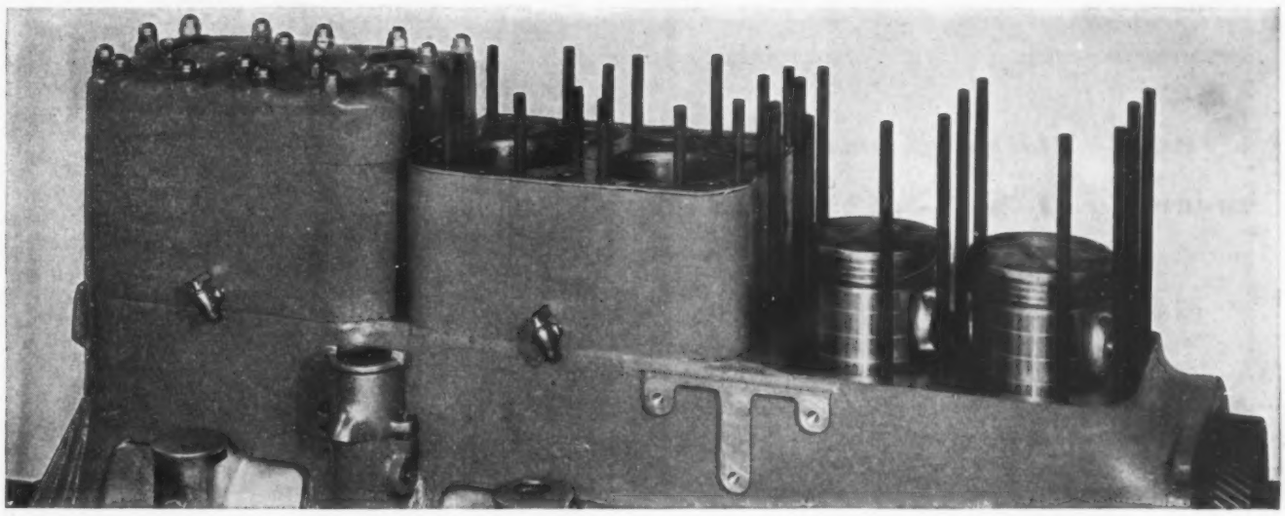
There will be plenty of company for the yachting fisherman. This is not virgin territory. If it were, there would be no legends about it. Men have fished around Nomans ever since the first of the Algonquins grounded at Gay Head on an ice-cake that drifted from the Penobscot, and that was some time ago. Commercial fishermen followed, making Nomansland a base from which they operated, but the exposed position of the island and the lack of harbor forced them to haul out their small boats far too often for comfort, and the advent of the gasoline engine found the island forsaken except for a few small vessels which habitually anchor under the lee of the land for short periods each season.

It should not be necessary to warn any skipper about fog, but it is well to remember that the tidal currents run from two to four knots in this neck of the ocean and such things can cause much difficulty and inconvenience, as the Gay Head Coast Guardsmen can testify. Almost every season some yachtsman who ought to know better, and probably does, scrapes acquaintance with Davy Jones by playing around in a vapor that starts his standing rigging from pressure of density. Better "lay it out." In due time it will lift — at any rate it always has.

One more word of advice. The seasoned man already knows this, but there are always beginners, as the sideline audience frequently observes. Don't tow your fish after you have killed it. About once a week in summer some trusting soul comes in hailing a 400-pounder and hauls in a few fathoms of warp to exhibit the prize. He usually brings to light a collection of tooth impressions ranged along both sides of a seven-foot backbone. The sharks like sword, tuna or anything else in the line of sea food about as well as mankind and can dispose of considerable more per individual. On deck will be better and a piece of old canvas will serve as protection.

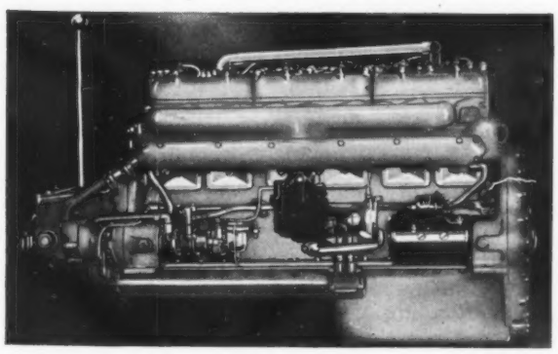
Conscious that the foregoing lines smack somewhat of board-of-trade publicity, perhaps further explanation may be in order. Given the legs, either power or canvas, a yacht can venture wherever fishermen of equal size can go. All right. Consider the number of commercial fishermen from Noank, New London, Block Island and points "nothe"-by-east that drop into Menemsha Creek every time it breezes. There is no need to ask why they happen to be so far from home. And again, few vessels of the larger commercial type are to be found around Nomansland in July and August or September. They are down around South Shoals, on Georges, or farther east. If the yachtsman is desirous of following this deep-legged fleet, nothing could be more simple. But the same procedure of icing-up, freighting provisions and water, etc., must be complied with.

Which brings us back to the point of starting, Nomans. And whether you elect to operate from Menemsha, Vineyard Haven, Edgartown, New Bedford or Westport, the ancient treasurers of legends more ancient than themselves will agree that Nomans and its vicinity will offer you the best opportunity for rod or iron along this section of coast — and this in the midst of the domain of the Indian deity Moshup, and the biggest thing that ever lived in this land of big fish and bigger fish stories.



Though obviously more expensive this type of through stud construction, exclusively SCRIPPS, is found superior for motors having a cylinder bore of 4 inches and over. The separate cylinder blocks and heads, cast in pairs, are bolted to the crankcase without danger of distorting the cylinder walls. A positive trueness of cylinder bores is thus assured. Servicing by one man, to remove carbon or grind the valves becomes easy. The work may be done outside of the boat, without rigging or hauling motor from the hull, effecting a worthwhile saving in labor charge and putting the boat back in commission in the shortest possible time.

Every unit of a SCRIPPS engine is knowingly designed to directly contribute to its dependable performance and its extra long life. Also, SCRIPPS projects cylinder skirts beyond the water-jacketed area. This feature keeps warm the lower portion of the cylinder blocks. Condensation which causes sludge is prevented. The oil in the crankcase remains full bodied. Lubricating qualities are maintained, thereby prolonging life of engine and reducing lubricating cost.



Model 154—medium speed—6 cylinders, 118 h. p. at 2000 r. p. m. A typical SCRIPPS marine engine; containing all the distinctive features of superior design and perfect construction that give to every SCRIPPS a reliability of action and a dependability of performance that create in a boat owner a sustained pride of ownership.

WRITE *today and learn the moderate cost of a SCRIPPS power plant. Give essential details—length, type of craft, speed desired, or horsepower needed. We will then send you illustrated literature fully describing the model recommended as best suited to your individual requirements.*

Let's look INSIDE

THE admirable appearance of a SCRIPPS marine engine with its glistening enamel and chromium, its graceful contour and simple compactness, naturally implies correctness of design and perfection of construction in every single detail. A casual glance may lead to the belief that a SCRIPPS is merely conventional in design, with an extra dose of exterior glamour. Not so; let's look inside . . . Cylinder heads and cylinder blocks are cast in pairs and separate from the crankcase. This original construction by SCRIPPS compensates for expansion and allows also the use of light alloy for the crankcase. These units are assembled with studs through the exterior walls by bolting the heads and blocks to the crankcase individually and rigidly without distorting the cylinder bores. The result is a smoother and cleaner running engine and longer life to pistons and rings . . . The "L" head construction, standard on all SCRIPPS, is accepted by engineers as the best design to produce a quieter, smoother action in an engine of least height, and also permits maintenance operations to be made without loss of motor timing. SCRIPPS engines are remarkably low. When installed, they set lower in the hull, which means greater boat stability and less height required for superstructure. . . . All the vital parts and essential features of SCRIPPS engines are designed with a thorough understanding; to function in perfect coordination; to endure the hardships of marine engine duty and to give economically a long life of dependable service. Thus is evidenced beyond a doubt, the superiority of SCRIPPS. . . Personally investigate SCRIPPS. Look inside.

The SCRIPPS complete line includes 32 models of strictly marine engines for high or medium speeds in direct drive. 4, 6, and 12 cylinders, 25 to 300 h.p. in single installation, up to 600 h.p. in twin installation and with reduction gears for the heavier hulls.

SCRIPPS MOTOR COMPANY
5833 LINCOLN AVENUE, DETROIT, MICHIGAN

SCRIPPS

THE MOTOR THAT CROSSED THE ATLANTIC

Seaworthy! That's the meaning of "SEA-SEASONED"

Your craft is just as seaworthy as its weakest fitting. Play safe—use W-C Sea-Seasoned Fittings!

W-C Products purchased from your dealer cost no more than others. What is more, W-C fittings combine the most modern designs with the "know how" of long and far-reaching experience—plus that quality which identifies the nation's oldest and largest maker of marine hardware.

Have you the new No. 1934 catalog? Send for a copy, giving your name and address, and enclosing 25c to cover mailing costs.

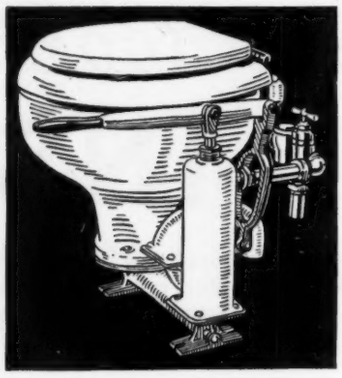


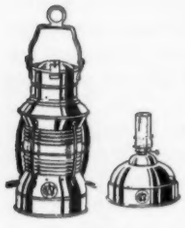
Fig. 1500, No. 1 "Regular" Seaclo Yacht Closet

Either Oak or Mahogany Seat and Cover. Has large snow-white china bowl—long stroke pump—hand operated supply valve. All metal parts in Plain Bronze Finish. Specially priced at $25.00 each for a limited period.

2

Fig. 2, Lebby Searchlights

Powerful and efficient. Brass throughout. Equipped with Patented Lebby Compensated Mirror Projector. Full free turning. 40° elevation and depression range. Instant focus from spot to flood. Made in 7", 10" and 14" diameter sizes. Priced from $63.00 up.



20

Fig. 20, "Ten Day" Anchor Lights

Oil Burning. Can be depended upon to stay lit. With proper trimming will burn continuously for ten days without attention. Equipped with Navy Specification Brass Guards. Bail of heavy Cast Brass. Galvanized Iron, Price $10.50 each. Polished Brass, Price $12.50 each.

854-A

Fig. 854-A, Brass Binnacles

Electric Lighted. Made of heavy gauge Spun Brass, beautifully polished. Dull black enamel finish inside. Non-magnetic. In sizes from 2½" to 5". Priced from $13.75 each up, including Compass.

Write for name of your nearest dealer

WILCOX, CRITTENDEN
& COMPANY, INC.
ESTABLISHED 1847
10 South Main Street, Middletown, Conn.

Get After That Motor!

(Continued from page 64)

Generator was not charging battery. Battery gave out when only half the gas allowance was used. Motor conked. No prize for this chap.

Gasoline would feed to carburetor on port tack, but not on starboard. Last 40 miles of race were on starboard tack, heavy sea. The good ship finished with four gallons of gasoline in her tank — and missed winning by a small margin.

Skipper had no idea whatever how much gas his motor used. Ended up with half his allowance still in tank. He didn't win, either.

Distributor was old and worn, causing intermittent missing of motor, and decided inefficiency. Impossible to make repairs under way. No prize.

Feathering wheel failed to feather, causing unnecessary drag when under sail. Was not far from the prize money. If the wheel had feathered properly. . . .

The question asked most often, and a very difficult one to answer, is: "When should we use our motor?" For each boat runs at a different speed, each boat sails at a different speed, and each boat has a different allowance of fuel, so you can see that no definite rules can be laid down. However, I shall try and give you a few pointers, so you'll get the general idea, after which you'll have to work out your own particular problem in your particular race.

One old rule is as follows: When your sailing speed falls below your economical motor speed, use the motor. This is a fairly good rule at times, but don't swallow it hook, line and sinker.

It should be obvious that in a calm, or very light air, the motor is essential.

If you are beating to windward, especially in a mean sea, use the motor to help out. You can often strap her down hard, point high, and foot fast.

Figure out your average sailing speed. Plot and measure off your course. Find out what the current will be doing at various points of this course — it will run much faster in some places than others. Endeavor to reach certain dangerous points (where the tide runs strong, such as The Race, Plum Gut, etc.) at a favorable moment. Use the motor or not, as your figures indicate. Open up wide if it will help you catch a favoring current in a place where the current is strong. Don't use it at all if it merely brings you to a spot where you'll be bucking it — save your gas for a more propitious moment.

The wind is generally lighter at night than during the day. Figure on using your motor at night.

Save some gas for the last ten or twenty miles of the race. It is maddening, and probably fatal, to be becalmed a mile or so from the finish, with no gas to run on.

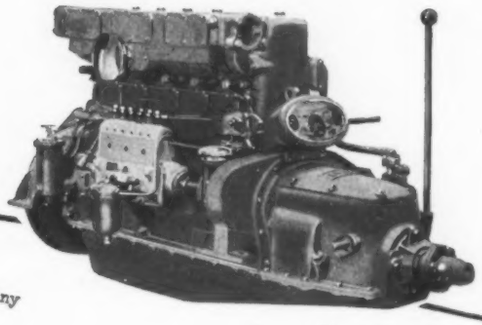
Have a clean stick, or folding ruler, or other device, with which you can measure your gasoline accurately at any time during the race.

Hold out a gallon of gas in a separate can when you fill up before the start. That emergency gallon is an important safeguard in case your measuring device is a bit inaccurate.

Inefficient motors don't win auxiliary races. Neither do motor breakdowns. Tune your motor to its peak of efficiency, run it at its most efficient speed, and ward against breakdowns by careful overhaul, preparation, and operation. And good luck to you.

This man's livelihood depends on BUDA

Buda 6-cylinder M.A.N. Full Diesel Engine used on the Bezo



The Buda Company
Harvey
Illinois

Miami, Fla.
May 7, 1934

Gentlemen: Attention: Mr. G. E. Wright

Since writing you in regard to the wonderful performance of my Buda Diesel engine after 200 hours service, I have added over 1200 hours more and am glad to report that it has had absolutely no mechanical attention of any kind with the exception of the normal clutch adjustments.

The spray nozzles have not been cleaned to date and judging from the sound of the motor they will not need it for some time to come.

Our fishing business requires at least ten hours continuous running at intermittant speeds every day, and my motor has never stopped or failed to start almost instantly in the 1400 hours of use.

I have experienced no crank case dilution whatever, and my lubrication oil consumption seems to be somewhat less than a quart per day of ten hours running.

I figure that my total saving for the season's operation of 140 days or 1400 hours actual running time is slightly more than $550.00

You hear a lot of reports that the small Diesel is coming but my experience is that it is here and thanks to The Buda Company and your Miami agent, Forest E. Johnson, who sold me my engine.

Yours very truly,
Capt. Jesse Conyne
Capt. Jesse Conyne,
Pier 5 City Yacht Basin
Miami, Florida.

ANOTHER letter from Capt. Conyne — another endorsement that emphasizes just the advantages you want!

$550 saved on his season of 1400 hours!

No crankcase dilution!

And the injectors have never been cleaned!

In a previous letter he said that his speed had been increased 33⅓%, his cruising range doubled and his business improved.

Here is a man that lives with his engine day after day — his livelihood and life depend on its dependable operation.

His endorsement is the best possible argument why you should investigate the Buda Diesel.

Let us help you in making your boating safer, cheaper and happier. Write for complete details.

THE BUDA COMPANY

Harvey (Chicago Suburb) Illinois

BUDA MARINE ENGINES

DIESEL OR GASOLINE

TEACHER'S

"HIGHLAND CREAM"
SCOTCH WHISKY

For more than a century the fame of this fine old Scotch has spread wherever ships have anchored. Teacher's enjoys world-wide favor because of its full body, delicate bouquet, mature mellowness and delightful "smoky" flavour.

PERFECTION OF OLD SCOTCH

Distilled, aged and bottled in Scotland by Wm. Teacher & Sons, Ltd., Glasgow & London. *Est.* 1830.

Sole Agents for the United States:
Schieffelin & Co.
New York City
Importers since 1794

This advertisement is not intended to offer Teacher's Scotch Whisky for sale or delivery in any State wherein its use is unlawful.

An Active Season Begins

(*Continued from page 73*)

closed club races, in addition to seven open events.

The Chicago Motor Yacht Club, headed by Commodore Paul Hotchkin, has its fleet of 35 cruisers and runabouts ready for the events of the Lake Michigan Yachting Association Regatta July 4th, an interclub race with the South Shore Power Boat Club July 28th, and the annual Waukegan Race over Labor Day.

A new organization, the Great Lakes Cruising Club, has been formed, with headquarters in Chicago. The new club, according to Commodore Ralph B. Cobb, will put particular emphasis on long cruises in the Great Lakes and tributary waters. Fifty Corinthians were in attendance at the first meeting.

The 1934 L. M. Y. A. Yearbook, published last month, quotes a total of 662 yachts enrolled in member clubs on the Lake, 363 of which are power and 299 sailing craft.

JOHN WARING, JR.

\+ + +

"Fifi" and "Fancy Pants" Win

THE second Annual Spring Dinghy Regatta of the Essex Yacht Club, sanctioned by the North American Dinghy Association, was held the week-end of May 19th–20th, no less than 29 dinghies enjoying a fine two days of sport in excellent weather. The first day was in the nature of a "tune-up" day for both classes A and B, with a team race or two thrown in for good measure. In Class A the Essex Y. C. team of four boats, fresh from their triumph in Bermuda, cleaned up a team from Narragansett Bay by a score of 20 to 16, while the Essex Class B team had little trouble in defeating four Boston boats to the tune of 13 points to 8.

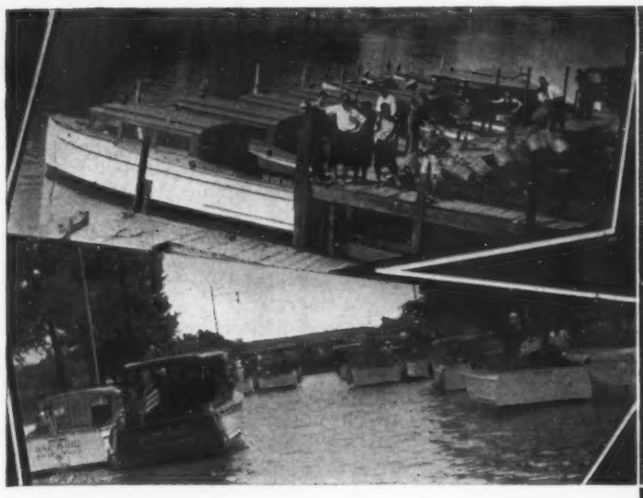
Six fine races were held on Sunday, the second day, with a southerly breeze which varied from light to fresh, and which was decidedly fluky at times. *Fifi*, with three firsts, a second, third and fourth, amassed 108 points in Class A, thus winning her second leg on the Roosevelt Trophy. George Hart's *Vodka* was second, with 92 points, while Mrs. Helen Hill came in third with *Fanny Dunker* with 87 points.

Frank Campbell continued his winning streak in *Fancy Pants* in Class B, winning his first leg on the Essex Trophy with five firsts and a second for a score of 66 points against Cornelius Shields' *Softy* with 53 points, Jack Wood annexing third honors with *Jade*.

Following is the summary:

CLASS A. *Fifi*, Sam Wetherill, 108 points; *Vodka*, George Hart, 92; *Fanny Dunker*, Helen Hill, 87; *Liza*, Walter Rowe, 79; *Filalet*, 72; *Nutshell*, 70; *Ker Choo*, 69; *Sunburn*, 69; *Banshee II*, 67; *Igloo*, 63; *Katink*, 59; *Long Shot*, 55; *Trinket*, 52; *Padded Cell*, 52; *Twinkle*, 43; *Tadpole*, 34; *Cublet*, 27; *Dottie*, 20; *Snow Plow*, 20.

CLASS B. *Fancy Pants*, Frank Campbell, 66; *Softy*, C. Shields, 53; *Jade*, Jack Wood, 48; *Mae West*, 46; *Zenith*, 40; *Little Dipper*, 40; *Marlin*, 37; *Bingle*, 20; *Dodgit*, 15; *Beta*, 13; *Chilblain*, 9.



THE Fifth Annual Sailaway Cruise of the Richardson fleet was a complete success. Every Richardson and every Gray performed perfectly. All of the fifty participants enjoyed themselves 100% during the six days of perfect weather.

If you seek a perfect boat for a perfect cruise, get a Richardson and go when and where you will.

There are three sizes with fifteen interior arrangements to meet the requirements of the most exacting yachtsman and his crew. Prices range from $1307 to $4600 for a Richardson at the dock ready to sail away.

Send for booklet "F-34" illustrating and describing the 24' Richardson Little Giants, 28' Richardson Juniors and the 32' Richardson Cruisabouts or inspect a Richardson at your leisure at the following dealers:

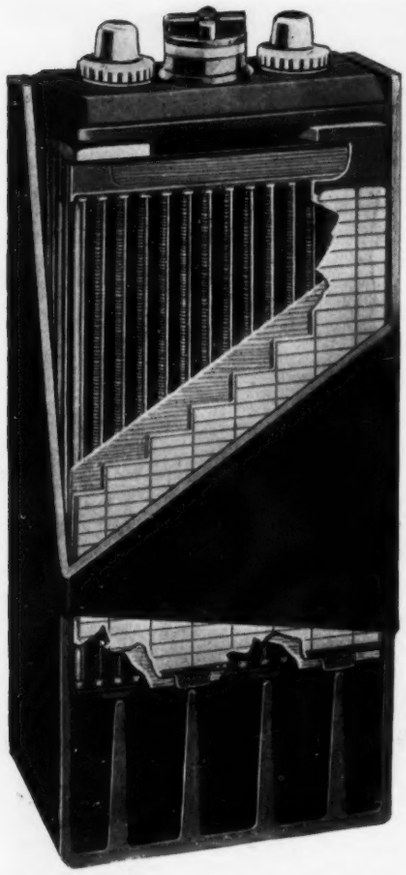
Bruns-Kimball & Co., 5th Ave. & 15th St., New York City; Walter H. Moreton Corp., 1043 Commonwealth Ave., Boston, Mass.; Flood Gate Motor Boat Sales Agency, 14th & Water Sts., Washington, D. C.; Hensler-Kofoed, 156 Front St., Keyport, N. J.; Burritt Boats, Ft. Broad St., Stratford, Conn.; DuMont Marine Sales & Service, Municipal Pier, New London, Conn.; H. J. McDonald, Merrick & County Line Rds., Amityville, L. I.; Bennett Boat Co., Mayfield, N. Y.; C. P. Amory, C. & M. Bank Bldg., Newport News, Va.; Henry I. Coleman, 9 Bay St., West, Savannah, Ga.; S. S. Levy, Union Bldg., New Orleans, La.; Stadium Yacht Basin, Ft. W. Third, Cleveland, Ohio; A. M. Deering, 1454 Builders Bldg., Chicago, Ill.; C. E. Padgett, Quincy, Ill.; Hill-Manning Boat Corp., Tonawanda Island, N. Tonawanda, N. Y.

RICHARDSON BOAT COMPANY, INC.
368 Sweeney Street North Tonawanda, N. Y.

RICHARDSON

LITTLE GIANTS **JUNIORS**

CRUISABOUTS



Showing the exclusive Exide-Ironclad positive-plate construction. Slotted rubber tubes retain the active material, while exposing it freely to the electrolyte.

. . . . . When you buy an Exide you get more than a good storage battery

Behind each Exide stands battery-building experience gathered over a period of nearly half a century—not from any one source exclusively, but from every storage battery application in the world. For Exides are used in every branch of industry, and in every modern mode of transportation, ashore, afloat, and in the air as well.

When you buy an Exide, you are assured of the dependability, sustained power, low maintenance costs and long life which this broad experience alone makes possible. And you are assured of an engineering service organization behind the battery which enables you to get out of an Exide all the outstanding value built into it.

THE ELECTRIC STORAGE BATTERY CO., Philadelphia
The World's Largest Manufacturers of Storage Batteries for Every Purpose
Exide Batteries of Canada, Limited, Toronto

Exide
IRONCLAD
MARINE BATTERIES

Honolulu Race Assured

THE Honolulu Race now seems well on its way toward success. Two owners are largely responsible, Harold Dillingham of Honolulu and H. T. Horton of San Diego. Horton has said all along that he would take his 80-foot ketch *Vileehi* to Honolulu this summer, race or no race, and Dillingham has been equally steadfast in his determination to bring his 61-foot schooner *Manuiwa*, ex-*Highlander*, to the Coast provided there was any certainty about the race.

Manuiwa left Honolulu on May 14th, and arrived at San Pedro on May 29th. Her time, just over 15 days for the 2200-mile passage sets a new record for yachts, as the best previous time was 17 days. On May 22nd the 45-foot yawl *Dolphin*, skippered by Alvin Smith, left Honolulu for San Pedro, and a fourth entry developed when C. E. Hoffman ordered his 80-foot schooner *Fandango* made ready. The latest entry is the 45-foot yawl *Viva*, owned by Mary Miller of the San Diego Yacht Club. This brings the total of definite entries to five, and other owners are seriously considering the race.

The start will be made from San Pedro on July 4th. The date was originally July 1st, but this was changed recently to give a little more time to prepare. There is no size limit for eligibility, the only requirement being that any yacht offered for entry must, in the opinion of the committee, be sufficiently seaworthy to make the passage. The race is run under the jurisdiction of the Transpacific Yacht Club, an organization composed of amateurs who have taken part in a race to Honolulu or Tahiti.

The Honolulu Race is the longest blue water event this year.

H. B. WARREN

\+ + +

Harvard Wins MacMillan Cup

THE fifth intercollegiate championship series was sailed off Marion, Mass., June 14th and 15th. Yale and Cornell tied for the lead in the two races finished on the first day, sailed in light and variable winds, the third contest being broken up by a severe squall. But they lost their lead on the second day's racing when Harvard made a clean sweep of the four races and clinched their hold on first, thereby winning a second leg on the MacMillan Cup. Yale took second place and Princeton third. The final point score was: Harvard, 31; Yale, 23; Princeton, 20¼; Dartmouth, 19¼; Williams, 19; Cornell, 15.

At the annual meeting, William S. Cox, of Princeton, was elected to succeed W. B. Cudahy of Harvard as chairman of the executive committee, the other members being Frank Makepeace, of Cornell; Robert Collins, of Dartmouth; Frank S. Deland, Jr., of Harvard; Robert Carrick, of Williams; and Charles Dunbar, of Yale. Leonard M. Fowle, Jr., of Boston, was chosen as secretary. The Intercollegiate Association, besides coöperating with the Interscholastic Association in an effort to secure a class of one-design boats for the championship races, voted to encourage dinghy racing between the title events.

YACHT PAINT

PAINT does more than "beautify" your boat. Without paint your boat would soon rot and go to pieces.

Only the finest paint and varnish can stand the hard use they receive on a boat. And only the finest paint will give entire season protection to expensive hulls and fittings.

International Yacht Paints will give full protection for the entire season. It is poor economy to gamble with inferior products. And International Paints cost no more than brands of untried quality.

Send for our free color card

International Paints

International Paint Company, Inc.

21 WEST ST., NEW YORK, N. Y.

Of Interest to the Skipper

(Continued from page 83)

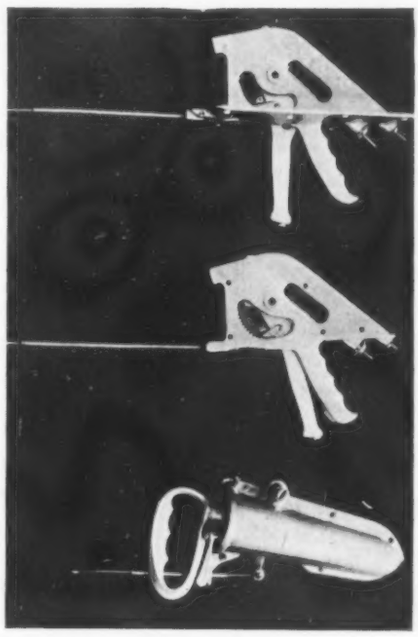
Detroit and St. Clair Rivers. A heavy sea was rolling on Lake Erie, but, after refueling, a start was made. After a 15-mile run, though all hands seemed to be enjoying the tussle with the rough water, it was thought that completing the trip might be too tiresome, so the fleet put back to Amherstburg for the night. Next morning the voyage was resumed and the fleet reached Cleveland soon after lunch.

\+ + +

A New Type of Oar

A novel type of oar, devised by Wm. G. MacDougall, superintendent of Peirce & Kilburn, Inc., of New Bedford, Mass., has attracted attention. These are known as the Sportsman oars and, it is stated, feather of their own accord, are light and quiet in operation, and stow in half their extended length. It is said to be impossible to catch a crab with one nor will a sea flip it out of the oarlock. When let go, the oar trails alongside ready for instant use. Sportsman oars will be on the market this summer at yacht outfitters and sporting goods stores.

\+ + +



The Richardson automatic throttle for outboards is made in three types

Automatic Throttles for Outboard Racers

The Richardson automatic throttle is being used by a number of racing men in outboard events. Among them is James Rogers, national champion in Class C, Division II. Last fall he cracked up a power head in a capsize. This spring he has been doing some fast experimental running and has already had two spills in neither of which, thanks to the throttle, has his motor been injured. George Kuehn, Class C, Division I champion, saved his equipment in a spill last fall. Many others have had similar experiences.

The Richardson throttle is made in three types and may be used on any size or model of racing motor. It is distributed nationally by the Outboard Motors Corporation, Milwaukee, Wis.

Keep your White Shoes White

Discriminating Yachtsmen have used PEE-CHEE for over 20 years

Pee-Chee cleans white shoes perfectly, it will not harden leather or canvas. Pee-Chee removes the dirt and grease. Your shoes will be clean, soft and white as new, when you use

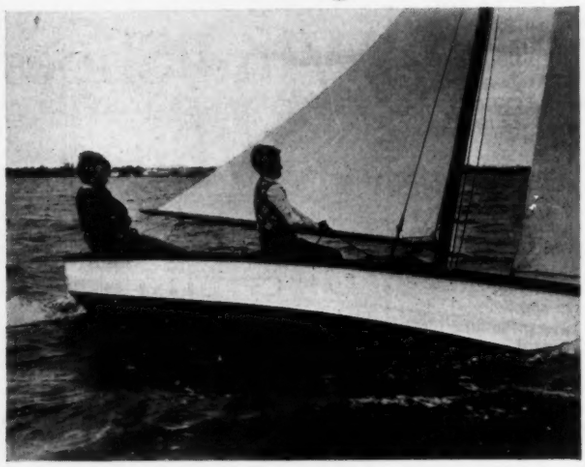
PEE-CHEE

Quick and Convenient

The large 5 oz. bottle is available in all stores at 25c. The convenient trial size on sale in the better class 5 and 10c stores at 10c.

YACHTING'S SCHOOLS

Sailing



Not only do the Adirondack-Florida School boys sail their own craft in weekly regattas, but they enter races at the Biscayne Bay Yacht Club, of which the School is a member

FOR GIRLS

PENN HALL
JUNIOR COLLEGE
Accredited Two-Year Classical and General Courses. Credits transferable 100%.
PREPARATORY SCHOOL
Individual instruction in preparing for the College Board Examinations. Also General Course and Home Economics, Dramatics, Music Interior Decorating and Secretarial Science.
Frank S. Magill, Headmaster
Box 40 Chambersburg, Pa.

MISS HARRIS' FLORIDA SCHOOL
A northern school in a tropical climate. Outdoor classes all winter. Swimming, tennis, riding. Boarding and Day. For entire year or short periods. College Preparatory Courses. Separate Junior Department for the very young.
Julia Fillmore Harris
1066 Brickell Ave., Miami, Fla.

KINGSWOOD
SCHOOL CRANBROOK
A distinctive, endowed school, grades 7–12, offering college preparatory and general courses and an optional post graduate year.
Facilities for students revealing talent in the arts and sciences, through affiliated Cranbrook institutions.
Beautiful new buildings; individual rooms. 50-acre site on lake.
For catalog: The Registrar
Cranbrook Rd., Bloomfield Hills, Mich.

ANNA HEAD
SCHOOL FOR GIRLS
Established 1887
College Preparatory and General Courses
Accredited — East and West
Post Graduate Department and Lower School
Music, Art, Home Economics
Outdoor life the year round
A home-like School in a College Town
Miss Mary E. Wilson, L.H.D., Prin.
2520 Channing Way Berkeley, Calif.

THE BISHOP'S SCHOOL
On the Scripps Foundation. Boarding and Day school for Girls, preparatory to Eastern Colleges. Good academic standards. Intermediate grades. Modern equipment. Outdoor pool.
Caroline Seely Cummins, M.A.
Vassar, Headmistress
Box 75, La Jolla, Calif.

FOR BOYS

THE NOVA SCOTIA TRAINING CRUISES
Dr. W. Frederick Dey, Director
Bermuda, Turk's Island, San Salvador, Bahamas, Newfoundland, Labrador, Nova Scotia
Five Weeks at Sea under Sail
Write for folder to
J. Halsey Gulick, Manager
172 Cushing St., Providence, R. I.

ROXBURY
A College Preparatory School for boys, grounded in tradition, progressive in outlook. Every student an individual thoughtfully studied. Flexible Curriculum. Large Faculty. Junior Department. *Address:*
A. M. Sheriff, Headmaster
Cheshire, Connecticut
(15 miles north of New Haven)

SOMERSET HILLS
FOR BOYS 7–15
All sports including Horsemanship and Fencing.
Address: Rev. James H. S. Fair
Far Hills, New Jersey

ADIRONDACK-FLORIDA SCHOOL
Onchiota, N. Y. Coconut Grove, Fla.
Individual college preparation combined with stimulating outdoor life in two ideal climates. Six Forms for boys 12 to 18. Flexible scholastic program. Fall and Spring in Adirondacks. Winter in Florida. *Catalogue.*
KENNETH O. WILSON, Headmaster
Onchiota New York

FOR BOYS AND GIRLS

MERRICOURT
For those who travel or entertain much, the best place for the young children is at Merricourt, country boarding school and home camp for girls and boys from one to twelve. Small select group accepted by the month or year.
Rev. & Mrs. J. W. Kingsbury
Berlin, Connecticut

Write direct to these schools for information, or to
Educational Adviser, PORTER SARGENT, 11 Beacon St., Boston

The Art of Going and Coming

(*Continued from page 58*)

LONGITUDE BY EQUAL ALTITUDES

Time of forenoon sight, by watch	11°	28′	10″
Time of afternoon sight, by watch	12	28	30
Sum	23	56	40
Divide by 2, to get halfway time	11	58	20
Watch was 2 seconds slow, add correction			02
Corrected watch time, when sun crossed meridian	11	58	22
Add 5 hrs. to convert watch to Greenwich time	5	00	00
Greenwich Time of day of True Noon at Ship	16	58	22
Equation of time from Almanac, subtract because sign is minus		−2	49.6
Greenwich Time of day of Mean Noon at Ship	16	55	32.4
Greenwich Time of day of Mean Noon at Greenwich	12	00	00.0
Difference is longitude expressed in time	4	55	32.4
or Longitude, west (convert by using Table V in Almanac, or otherwise)	73°	53′	06″

The latitude obtained by the observation was within ⅕ of a mile of the true position, and the longitude was within 4¼ miles, which is close enough for anybody who is just Going or Coming.

\+ + +

Let's Have Some Development

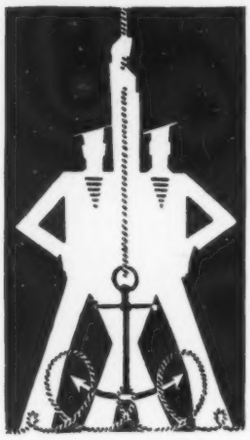
(*Continued from page 53*)

Cup motor with which Horace Dodge's staff had been experimenting all winter, made a real race of it until the "blower" went sour. Thus it was borne out that in order to run on close terms with a non-supercharged Twelve-Litre, an American Gold Cup boat had to be "blown." One of the astonishing things about this brief series was the manner in which Prince Carlo Ruspoli's Six-Litre *Niniette IV* ran away from *Delphine VII* and Jack Rutherfurd's *Imp* in the second race. *Niniette*, with a supercharged engine of about 360 cubic inches piston displacement, left the Gold Cuppers as though they were anchored. All of which would indicate that the Italians know something about hull design and supercharging.

No one was quicker to realize that the Italians had something valuable to teach us than our defeated Gold Cup owners and the small knot of speed boat cognoscenti who watched the debacle from the beach. The day after the series ended this group met with George Townsend and the Italian drivers, Becchi, Ruspoli and Count Theo Rossi, and worked out tentative plans for bringing the two classes into closer alignment. This will have to be done if we are to maintain the European racing contacts begun at Lake Garda a year ago by Captain John Wanamaker and amplified by the Florida meetings.

The Twelve-Litres are racing boats and do not pretend to be anything else. Their single step hulls are built as lightly as is consistent with ability to stand the punishment incident to competition. The cockpit is a small, cramped space perched in the stern as if it were an afterthought — certainly an afterthought in so far as crew comfort and safety are concerned.

Our Gold Cup boats are built to stringent rules which require a minimum hull weight of 1,600 pounds.



BEFORE YOU BUY *ANY* BOAT

...TRY OUT THIS a.c.f. 38′ CRUISER!

*If not convenient to call at City Island, write for full description, and address of the nearest sales agent.

Better than thirty miles an hour in any weather you'd want to be out in—here's the outstanding commuter, fine tender, or fast playboat of the season, for the man who wants the best. Try for yourself the thrill of driving 38′ of lunging energy at 31 miles an hour. See how beautifully she handles, how perfectly she responds to your touch at throttle or wheel. Try this a.c.f. 38′ twin-screw express cruiser today*—telephone COrtland 7-8100 (Mr. Chapman) for a demonstration.

a. C. f.

AMERICAN CAR AND FOUNDRY COMPANY

• • 30 CHURCH STREET · NEW YORK, N. Y. • •

Sales and Service Station: Foot of Fordham Place, City Island, New York

The Importance

of pure drinking water cannot be overestimated. Conserve your health by drinking more water—and the purest obtainable.

DRINK

GREEN LABEL

Poland Water

THE WORLD-FAMOUS NATURAL SPRING WATER

RED LABEL

Also the

Sparkling-Carbonated POLAND WATER

Perfect in adaptability — complementary to all beverages, bringing out the flavor of fine liquors without impairing their quality . . . The reason: the purest water — with Balanced Carbonation.

This exclusively men's store now includes a distinctive assortment of yachtsmen's accessories; ie. sail cloth suits made from genuine Burton sail cloth, a feature at $15.

Kaskel and Kaskel

Since 1867

567 Fifth Avenue
3 East 46th Street
New York City

★

GROCERY LIST

GRAND READY-TO-EAT FOODS TO PROVISION YOUR GALLEY SHELVES

★

Clip out this list for handy reference when you're stocking up for the next cruise.

Here are good satisfying foods for keen maritime appetites. Here are the celebrated Heinz "home-made" flavors. Best of all, here are square meals ready to eat!—foods that need only a few minutes heating and they're all ready to enjoy. Quick—easy—delicious! So why should a sailor be a galley-"slave"?

SEA FARE FROM THE 57:

HEINZ OVEN-BAKED BEANS
(Boston style, with pork and sweet molasses sauce. Or with pork and luscious tomato sauce. Or vegetarian style—no pork. Or red kidney beans in savory sauce.)

HEINZ HOME-RECIPE SOUPS
(Seventeen kinds. You can have plenty of variety. And each is ready to serve—nothing to add, no blending to do.)

HEINZ COOKED SPAGHETTI
(Cooked to an Italian recipe, with tomato and meat stock sauce.)

★

HEINZ TOMATO JUICE

HEINZ TOMATO KETCHUP

HEINZ PICKLES (10 kinds)

HEINZ PEANUT BUTTER

HEINZ RICE FLAKES

HEINZ PUDDINGS
(fig, date or plum)

Get these—plus your own special favorites from the famous

HEINZ *57* VARIETIES

★

The engines have reverse gears and electric starters. The theory is that when they are not being raced they can be used as "gentleman's runabouts." But, aside from George Reis, who even goes fishing in his *El Lagarto* on Lake George, have you ever heard of a Gold Cup owner using his boat as a runabout?

The ban on superchargers on Gold Cup engines, which Horace Dodge has fought so long, will be lifted in 1935. That probably means new engines and different hulls. At least three prospective Gold Cup hydroplane owners are delaying building into the class until next year for this reason. Why, then, is this not a good time to give the Gold Cup rules a thorough overhauling, eliminate the outmoded "gentleman's runabout" idea and develop a class that can have a lot of high speed sport at home at a reasonable cost and, when the spirit moves, tie up in an iron-melting contest with the best European craft of similar type?

Theoretically, the Gold Cup Class, our speed boat aristocracy, is a development class. Let us, then, have some development.

\+ + +

A Long Chance

(Continued from page 32)

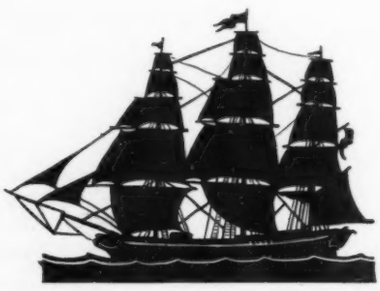
By this time news of our proposed departure had spread. The prophecies were dire. Advice was plentiful and much of it we took. The dangers of "icing up" were vividly depicted. In addition to overburdening a vessel with its weight, the ice coats the halliards so heavily that they will not run through the blocks and sails cannot be lowered. Pumps freeze. So do fingers and thumbs. And the decks become unduly slippery. We took heed of the warnings.

Advised to be prepared with ice-breaking mallets, Slade went to the mill and came back with four five-foot mallets, their heads made of heavy birch logs. Rock salt was secured to keep the pumps from freezing. I secured a large Quebec heater and half a ton of coal. Installed in the middle of the main cabin, the stove, christened "Red Hot Jenny" by Coulton, made that previously uninhabitable portion of the ship livable. In fact "Red Hot Jenny" soon became the center and source of life aboard.

By Thanksgiving Day we were ready to sail. One old fellow who was there to see us off expressed the general opinion of the waterfront in these words: "Well, byes, it ain't a question of whether the ship will stand up, but will you stand up?" The local newspaper also stated: "For those without knowledge of this coast a voyage of this nature is a bold venture and it is hoped that the schooner will meet with no mishap on her journey."

With these words to cheer us on our way, we set the storm trysail on the main and started down the Humber Arm toward the sea in a snowstorm.

(To be continued)



YACHTS

cannot enjoy the Great Western champagne with which they are christened • But you can..and there is none finer than this gay and gallant wine • To it belongs the unique record of having won six gold medals and Diplomas of Honor from Foreign Nations • To serve it is to make an occasian out of an episode • A card to the Pleasant Valley Wine Co., Rheims, N. Y., will bring you a Golden Booklet of distinguished recipes for champagne drinks.

This advertisement is not intended to offer alcoholic beverages for sale or delievery in any state or community wherein the sale or use thereof is unlawful.

A 1934 Marine model, full 7 power, at $81.

YOU'RE ABOARD WITH BAUSCH & LOMB BINOCULARS

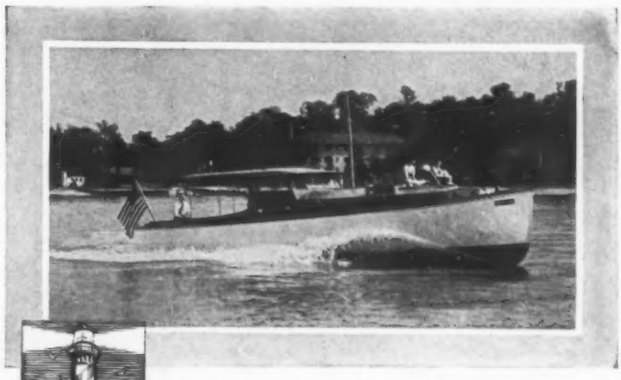
How much added drama and excitement you get with Bausch & Lomb Binoculars — tense faces of the crew — the instant snap into action at critical moments — strategy of clever seamanship.

Latest 1934 improvements: wider field of view, sharp to the very edge; brighter image; lighter, for one-hand use; prisms permanently aligned by metal straps. Ask your dealer.

Bausch & Lomb Optical Co., 722 St. Paul St., Rochester, N. Y.

Send for 40-page DeLuxe Catalog....Free

BAUSCH & LOMB
BINOCULARS



The "38" Twin Cabin model sleeps seven, has toilet, galley and complete accommodations for long trips — $5760 at plant.

There's No Place Like Home Aboard a Matthews *Cruiser*

After all, *comfort* is the one quality you most desire in your cruiser — and you have it in a Matthews. The big, husky hull assures you of unusual seaworthiness — more than average beam — extreme roominess — really wide berths — deep upholstered seats with 9 inch innersprings that really make you sleep — remarkable head room — soft carpeted floors — these are the things that count. Be sure you get them in *your* cruiser!

There are eighteen different models in 38-, 46- and 50-footers, from the husky Utility model to the rugged double cabin models ideal for family cruising. Priced as low as $3980.

"Wherever you cruise . . . you'll find a Matthews"

Investigate America's premier line of stock cruisers by sending today for the latest illustrated circular "Matthews Cruisers for 1934."

The whole country has gone wild about the "Sailer"!

Better hurry if you want one!

DETAILS

Length o.a. 25′ 7″, Beam 8′ 6″
Length w.l. 22′ 5″, Draft 2′ 8″
Displacement — 7000 lbs.
Maximum headroom — 5′ 8½″
Sail area 300 sq. ft.
Outside ballast 1850 lbs. Iron
Sleeps 4
Sink with pump
Spring mattresses
Oak keel and frames
75-lb. ice box
Enclosed toilet room
2-burner stove
Folding table
Full length locker
30-gal. water tank
Mahogany planking
Bronze screw fastened
Salt water construction throughout
Price $1995 at plant

If you prefer sail your choice will logically be the Matthews "Sailer" — the sensation of the yachting world. A 25-foot, single-handed cruising sloop of the famous "Sea Bird" type, she is a husky, fast, close-winded little ship, capable of going anywhere and providing accommodations unheard-of heretofore in anything less than 35 feet. The new circular on the "Sailer" containing running views and complete details is now ready. Send for it today!

A number of choice territories on the "Sailer" are now open for dealers

THE MATTHEWS COMPANY
314 Bay Side Port Clinton, Ohio

BARBASOL does away with brush and mug; gives a quicker, smoother shave

● A tube of Barbasol, a Barbasol Razor and Blade!

Sailor, there's the finest tools ever made to produce the kind of whisker-trimmings you read about.

If you're from Missouri, here's the thing to do next time you shave:—

Wet your face, spread on Barbasol, and go to work with your razor.

Note how pleasant it feels, how sweet the song that keen-edged metal sings as it whizzes through your whiskers.

Now rub the remaining cream into your chin, your jowls and throat. Note how soft and smooth the skin is, how free from the usual bite and irritation of brush and caustic lather.

That's giving Barbasol an honest trial, and if it doesn't satisfy by giving you the finest shave you ever had—with cold water or hot, with salt water or fresh—return the tools to any drug store and get your money back.

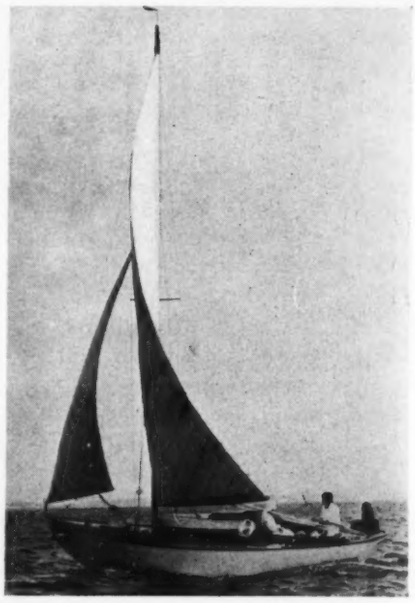
THE BARBASOL COMPANY
Indianapolis, Indiana

Barbasol presents EDWIN C. HILL, *news commentator, C. B. S. See local newspapers for time*

BARBASOL BLADES
5 for 25¢

A good, honest blade. That's what Barbasol set out to make, and that's what we've got to sell—a brilliant new blade, sharp as an ensign's tongue, true as the flagship's Colors. On sale wherever Barbasol is sold.

FOR MODERN SHAVING: NO BRUSH · NO LATHER · NO RUB-IN

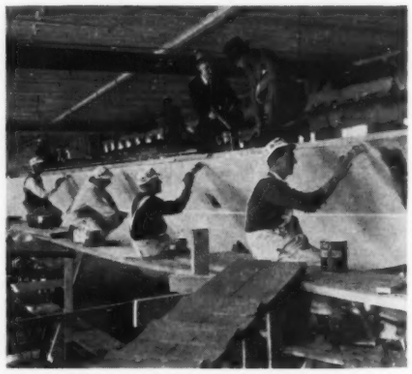


"Rowdy," a popular type of small auxiliary, is powered with a Universal Blue Jacket Twin

\+ + +

Painting the "Rainbow"

Though cup yachts today are built of alloy steel and bronze instead of the oak and pine of earlier years, the paint applied to their topsides is still supplied by Edward Smith & Co. That company's chemists have worked with the Herreshoff organization and have developed a special anti-corrosive priming paint of great adhesive strength. This is known as Ferrocote, and on top of this is put the Yacht White. *Rainbow's* topsides only are painted, her bottom being of bronze polished to a mirror-like surface. The hollow steel mast also is painted with the same finish as her topsides.



Painting the topsides of "Rainbow"

\+ + +

Red Wing Performance

A husky 30-footer of 8-foot beam and 30-inch draft operating in Boston Harbor has recently been powered with a 50 h.p. Red Wing-Hesselman type fuel oil marine engine. This is a 4-cylinder machine of 4½" bore and 5¼" stroke. It turns a 22 by 12-inch three-blade propeller 1000 r.p.m. at full throttle. At her normal cruising speed of 800 r.p.m., the boat makes 9 m.p.h. Less than three gallons of ordinary commercial fuel oil is required for an hour's operation. The quick starting, simple handling and smooth running of this type of engine, in addition to the economy and safety of an oil-burner, appeals to many owners.

You can thank Prohibition for this Marvelous Whiskey

But when this slim supply of 16 and 18 year old liquor is gone it's gone for good — so be warned and act now!

Whiskey so rare as this is really "occasion" whiskey — not for the everyday cocktail or highball, but for the unusual occasion

WHEN Prohibition clamped down some fourteen years ago, quantities of choice rye and bourbon stood aging in the bonded warehouses of the country.

The government permitted this liquor to be held beyond the accustomed 8-year legal limit to meet medicinal needs during the dry regime.

When what now remains of that original pre-prohibition supply is exhausted, it is doubtful if again in your lifetime you will be able to purchase rye or bourbon of such rare excellence and ripe age.

The government, with its pressing need of revenue, will likely again make it mandatory that all liquor be withdrawn from warehouses at the age of 8 years.

The famous brands OLD GRAND DAD, SUNNY BROOK *and* MOUNT VERNON *make up the greater part of this special limited stock, but also there are small quantities remaining of* HILL AND HILL, OLD McBRAYER, BOURBON *de luxe and* BLACK GOLD

How Much Still Exists?

Naturally each year the original stock has been drawn against, so that today only a fraction of these rare 16 and 18 year old whiskies remain.

Our pre-prohibition bourbons, for example, include such famous old names as Sunny Brook and Old Grand Dad, each over 16 years old. Some of them 18.

Mount Vernon, our only remaining rye in this category, ranges in age from 12 to 13 years.

We regret we are unable also to include our 16-year-old Old Taylor in this brief list, but the supply has been exhausted for some weeks.*

How Long Will They Last?

We have good reason to believe that within 6 or 8 months at the most there will not be an unsold case of pre-prohibition rye or bourbon in the country.

At the present rate of sale, not only will our own limited supply soon be in private cellars, but also that held by others.

The public, apparently, has suddenly realized that these venerable favorites are fast disappearing from the market — and is acting on this realization.

Certainly at the very moderate prices asked they are prizes that cannot possibly again be duplicated in this generation — if ever.

** Excellent bonded 4-year-old Old Taylor, of course, is available at nearly all leading hotels, liquor stores and bars*

PRODUCTS OF NATIONAL DISTILLERS

NATIONAL DISTILLERS